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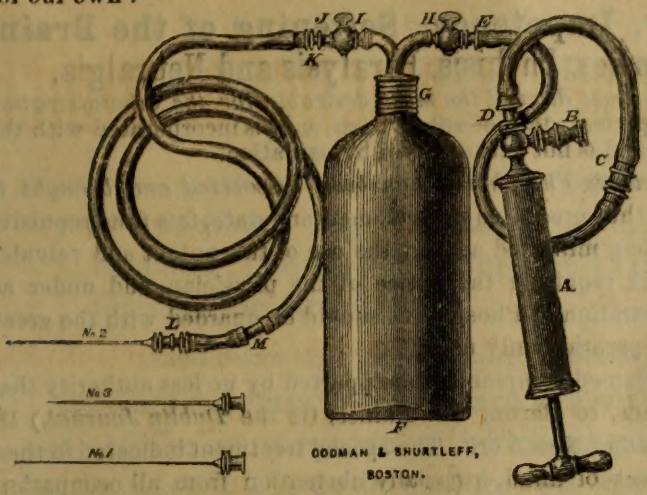
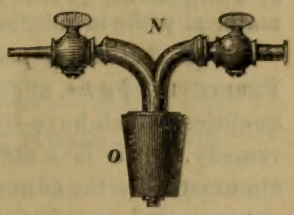


FIG. 68.



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CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Remarks on various Operations for Cataract, with statistics of 510 *Cases.*

By FRANK BULLER, M.D., M.R.C.S., England; late Resident Surgeon to the Royal London Ophthalmic Hospital.

(Read before the Medico-Chirurgical Society, Montreal.)

It is not my intention to weary you with labored descriptions of the many operations which have from time to time been proposed and performed for the removal of cataract, each of which has in turn found ardent admirers and zealous advocates, strong in their belief, that the nearest possible approach to perfection had at last been attained, and each of which has, in the opinion of its upholders, presented advantages—some real and some imaginary,—not to be claimed for any preceding method. Some of these operations have been born in obscurity and died in their infancy; others of more robust parentage have lived longer, and flourished for a time, but have likewise passed away, whilst others, again, endowed with still greater vitality retain all the freshness of youth and seem to be in a fair way to survive as long as the science which brought them into existence.

These last are, in a practical point of view, most worthy of consideration, and since the question as to their relative merits cannot yet be considered settled, it is fair to assume that fresh facts bearing upon this question will not be unacceptable to those who interest themselves in ophthalmic surgery. I therefore venture to place before you, in as condensed a form as possible, the results obtained in all the

operations done for uncomplicated senile cataract in the Royal London Ophthalmic Hospital during the last three years. The diagram is intended to show the three methods of extraction chiefly in vogue at the present time. The dotted line No. 1 is, as you will perceive, intended to represent the line of incision for the linear extraction of Von Gräfe. It differs very much from No. 2, in which the dotted line represents what may be called the oblique corneal, or median flap operation, the puncture and counter-puncture being made at or a short distance behind the sclero-corneal junction, in the horizontal meridian, and without iridectomy. The same knife may be used for its performance as in the Von Gräfe operation, its blade forming an angle with the plane of the iris, of about 45°, until the section is completed.

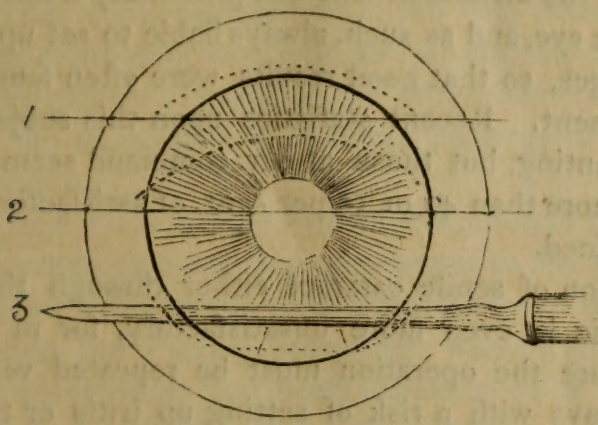
No. 3, which I shall call the sclero-corneal operation, is the modification of Von Gräfe's incision, now adopted by many eminent ophthalmic surgeons. The puncture and counter puncture are made nearer the corneal margin, the corneal flap is larger than the latter, and the top of the incision is usually made entirely within the cornea, consequently no conjunctival flap is formed.

Of course there is no absolutely fixed point for commencing the incision in any one of these operations, and hence certain variations will occur, partly accidental and partly intentional. The linear extraction of Von Gräfe, slightly modified, is I believe still practised by most German ophthalmologists, as well as by many others both in Europe and America.

The oblique corneal method, done either upwards or downwards, but without iridectomy, has not nearly so many supporters, though, for reasons I shall presently mention, it is likely to remain in favor with a certain number of operators. Lastly, the sclero-corneal operation seems to have found more favour in England than elsewhere, and it is more frequently performed at the Royal London Ophthalmic, than any other operation ; though, it must be admitted, with such an amount of variation at the hands of different

surgeons, that it was often difficult to decide whether in some instances the most appropriate designation would not have been "flap operation with iridectomy;" or in others, whether it should not be named "linear of Von Gräfe." But since the sclero-corneal junction was always to a greater or less extent involved in the incision, which however was never made so far back as in the scleral or linear extraction of Von Gräfe, or so far forward as in the old flap operation, I have determined to adopt the name sclero-corneal for all the operations done at Moorfields, which do not belong distinctly to one of the other classes mentioned.

Under this head then the larger number will be classed. There is a much smaller number of the oblique corneal



section, still less of the flap extraction, and in addition to these are a few in which the incision was made with a keratome, and the lens removed by a scoop. These last, only twelve in all, retain the old name of "scoop extractions," and form accordingly a class by themselves.

Before proceeding any further a few words as to why certain operations for the removal of cataract have fallen into disuse may not be out of place, inasmuch as they may help us to form clearer ideas in regard to the causes of failure or partial failure, which still too often attends each of the three operations now most frequently practised; for it is only by clearly recognizing these causes that we can

ever hope to render success a certainty, or that we can determine in any given case exactly how to proceed in order to give the patient the best possible chance of regaining vision. To begin with reclination or couching, it is inconceivable that an operation apparently so simple and easy, should have been abandoned by general consent, unless very strong objections were to be urged against it, and such we find to be the case. The principal objections are as follows:—The lens was apt to become broken and remain in part at least behind the pupil. It often ascended again and rendered the operation futile. Frequently violent inflammation followed the operation almost immediately and destroyed the eye. If everything went well for a time the dislocated lens was practically a foreign body within the eye, and as such, always liable to set up destructive changes, so that good results were often found not to be permanent. Recent statistics upon this subject are of course wanting, but those at our command seem to show that not more than 40 or 50 per cent. of satisfactory results were obtained.

Discission of senile cataract either through the cornea or sclerotic is even more unsatisfactory, for in order to effect a cure the operation must be repeated very many times, always with a risk of setting up iritis or traumatic glaucoma. I have seen one case, a man aged 58, who had had both his lenses needled thirteen times in four years and still they were not half absorbed. At this rate most persons afflicted with senile cataract would scarcely regain vision on this side of the grave.

The linear extraction invented by Gibson in 1811, soon fell into disuse, but was revived again for a short time in 1851. It was found, however, to be only adapted to soft cataracts, as any attempt to extract a hard lens through so small an opening, implied a degree of violence which even the best disposed eye could not fail to resent, nor was this all, for after the repeated introduction of traction instruments, insult was added to injury by the fragments of lens which

they had failed to remove still remaining in the eye, sure premonitors of future trouble. The operation known as "Flap extraction," is one which commands respect both for the successes it has to record and on account of its long and undivided reign. For more than a hundred years it was almost the only extraction performed. As far back as 1752 it is stated that out of 206 flap extractions 182 proved successful, and in 1873 Arlt of Vienna, after a very large experience extending over thirteen years and numbering 954 operations, claims to have obtained 79 per cent. of success, and only to have failed in 7.86 per cent. of his cases. But he records 1075 extractions by the modified linear method, in which he has obtained a still higher percentage of success and a lower one of failure, viz.: 83.72 per cent. and 5.67 per cent. respectively. He has, therefore, like most other ophthalmic surgeons, almost entirely abandoned the flap extraction in favor of the latter, believing that it offers on the whole decidedly better chances of restoring useful vision.

In England it was not until the introduction of chloroform into ophthalmic practice that men began to feel the urgent need of some other method of extraction, and they fondly hoped when the "scoop operation" was introduced that the great desideratum had been attained. For a time its results seemed to justify their enthusiasm.

The charges against the flap operation were (and they still hold good) as follows: The cornea lost, to a great extent, its proper source of nutrition, and was apt to necrose. The size of the flap tended to prevent perfect coaptation of the cut surfaces, which were also liable to be kept asunder by foreign substances. Prolapse of iris was likely to occur either during or after the operation. The iris was often much injured by the passage of a large hard lens through a narrow pupil, thus giving rise to traumatic iritis; and lastly vitreous humor often escaped, more particularly was this found to be the case when chloroform had been used and happened to have caused coughing or vomiting. Thus we

see the indictment against the flap operation is a heavy one. Not less serious are the charges against its immediate successor the "Scoop operation," for here we have the introduction of three instruments within the eye, besides the one necessary for making the incision. The iridectomy, however harmless initself, had a different significance when associated with the stretching and bruising of the iris, which occurred during the extraction of the lens. Portions of cortical substance generally became detached from the main body of the lens by the pressure of the scoop and were difficult to remove. So that in this operation fragments of lens frequently remained in the eye, and added to the misfortunes of the already sorely tried iris, nor was the latter slow in responding. Accordingly we find that a large proportion of these cases suffered from iritis, often of a severe type, and of the cases which apparently made a good recovery, very many required subsequent attention on account of thickened capsule in the pupil. Rupture of hyaloid membrane, caused by the introduction of the scoop, and consequent loss of vitreous was not an uncommon occurrence. In so far as this operation permitted the use of chloroform, or even rendered the administration of an anæsthetic almost indispensable, it may be regarded as a triumph over the one previously considered, but the drawbacks just enumerated soon cast a shade over the joyous hopes of its converts, one after another of whom were forced to acknowledge themselves disappointed in their expectations, for the test of experience, the only true guide in such matters, revealed the stubborn fact that disaster still too often attended their best directed efforts.

A few years sufficed to decide the fate of the scoop operation, and now it is to be placed in the category of those things which we often hear of but seldom see.

The method of Von Grâfe now succeeded the scoop operation and was soon almost universally adopted ; but many operators found themselves in a new dilemma occasioned by the extremely peripheral position of the incision, as

performed by the distinguished Berlin Professor. This led to slight modifications by one or other of his imitators, and as an outgrowth of these we have to-day the two methods of extraction indicated by the figures 2 and 3 in the diagram, neither of which can, however, as already stated, be looked upon as fixed and unalterable procedures, but may be varied in detail according to the exigencies of the case or the whim of the operator.

The statistics I propose to lay before you are mainly in reference to these two methods of performing the operation, due allowance must, of course, be made for the fact that these operations were not all the work of one man, but of several, and that no two of them perform the same operation exactly alike. I must own, to my sorrow, that in going over the record of the cases I have discovered many deficiencies, and am consequently unable to elucidate several of the points which cataract statistics, properly worked up, ought to shed light upon. There are, however, insuperable difficulties in the way of arriving at an exact knowledge of final results in hospital ophthalmic practice, and this must in part excuse the imperfections of any report which includes all the cases treated during a long period of time, if, as in the present instance, the number is very considerable.

Most of the cataract statistics hitherto published have emanated from private individuals or institutions superintended by the person who makes the report as well as performs the operations, hence they are open to the suspicion that everything has been done to bring out the work of the individual in the most favorable light possible, and for this reason many people profess to hold such statistics in very little esteem. No such reproach will apply in the present instance, for I claim to stand on neutral ground without bias of any sort, and without the slightest motive or inclination to represent facts in other than their true light.

The number of extractions which have come under my care whilst connected with the Royal London Ophthalmic Hospital is in all 579; of these 69 were complicated in

various ways and must be excluded from the statistics, leaving 510 cases of uncomplicated senile cataract; 416 were operated upon by the sclero-corneal method.

Of these 416 I find 323 are stated to have recovered without any serious drawback, (slight degrees of Iritis being left out of consideration) although at the date of discharge many of them could see but very imperfectly either on account of lens substance obstructing the pupil or from disturbance in the refractive condition of the cornea, the latter being either one of acquired astigmatism, or loss of normal transparency, which again may have been due to injury inflicted by the operation, or, possibly, to the prolonged use of bandages after the operation ; or, what is more likely a combination of these circumstances very frequently exists, and this is the chief reason why the vision test after cataract operation is not of much value, unless it could always be made at a time when the ultimate result may be regarded as established, say six months or a year after the operation. The impossibility of carrying out such a scheme in case of hospital patients coming from a distance is self-evident.

I have noted the vision obtained whenever it could be done, but without going into the details of each case, no safe conclusion can be drawn from the figures thus obtained, inasmuch as vision was sometimes tested just before the patient's discharge from the hospital, sometimes after an interval of several months had elapsed, the patient having returned to procure glasses, and often after needle operation had been done for secondary cataract.

Of the 323 sclero-corneal operations, the acuteness of vision was tested in 184, and was as follows ;

In	3	cases	V = $\frac{20}{30}$
"	4	"	" = $\frac{20}{40}$
"	9	"	" = $\frac{20}{50}$
"	19	"	" = $\frac{20}{70}$
"	42	"	" = $\frac{20}{100}$
"	43	"	" = $\frac{20}{200}$
"	36	"	" = $\frac{15}{200}$
"	10	"	" = $\frac{10}{200}$
"	12	"	" = $\frac{7}{200}$
"	4	"	" = $\frac{4}{200}$
"	2	"	
Total	184		

In the remaining 139 cases, in which vision was not tested, it is probable that better results were obtained, since

many of those in the above list had returned to the hospital on account of defective vision.

In ninety-five cases the course of events was less favorable.

Of these 26 recovered after rather severe iritis, leaving vision at least temporarily a good deal impaired. How many of them would require subsequent operative interference, I have had no means of ascertaining, but it is worthy of note, that in eleven instances the cause of the iritis seemed evident. Thus in four the incision had been made relatively too small for the size of the lens, in four others a considerably quantity of lens matter remained in the eye, and in three the iris was entangled at one corner of the wound.

Twenty suffered from severe iritis, leaving closed pupil, but good perception of light with a fair prospect of useful vision after an operation for artificial pupil in eleven of them, but nine were practically lost. The apparent cause of the iritis was only noted in five instances, and was smallness of the incision necessitating use of scoop in two cases, the presence of fragments of lens in the eye in two others. The fifth seemed to be the result of an inflammatory process beginning in the wound of cornea. In seven cases hæmorrhage into anterior chamber occurred several days after the operation, but without serious consequence, except in one instance, in which the bleeding seemed to be caused by an inflammation of the iris,it was repeated on several times and resulted in almost complete closure of the pupil with vision reduced to quantitative perception of light, the eye was probably lost.

Acute Panophthalmitis with total loss of vision followed the operation in 13 cases. Probably induced by constitutional cachexia in two instances, which occurred in feeble broken down work-house patients, one of whom lost his eye during an attack of diarrhœa on the third day after operation. In a third case, also a work-house patient in feeble health, the wound had not healed at the end of six

weeks when a small button of vitreous protruded, and shortly afterwards the eye suppurated. The fourth and fifth lost vitreous, and the lens was extracted with difficulty by means of a scoop. The sixth was due to an injury to the eye several days after the operation. The 7th was caused by a detached fragment of iris left in the eye. In the 8th, nucleous of lens was probably not exracted. The 9th perished by suppuration, beginning in edges of the wound. Four others went wrong without any ostensible reason.

Vitreous escaped during the operation or before the bandage could be applied in twenty-seven cases.

Two of these perished as just stated, by acute Panophthalmitis. Eight recovered without further complication. Nine suffered a good deal from inflammatory reaction, but made a fair recovery. In two cases the vitreous was cloudy, but condition of eye otherwise favorable when discharged. In six the reaction was so severe that the eyes were practically lost.

Three eyes perished from intra-ocular hœmorrhage, probably caused by vomiting after the anæsthetic used.

The results obtained in the seventy-five cases of extraction by the oblique corneal method stand as follows :

Forty recovered without any serious drawback. Seventeen recovered with anterior synechia, of which in nine the synechia was partial, in five it extended all along the line of incision, in three it was also complete, resulting from prolapse of the iris.

Four suffered from severe iritis, but made a good recovery.

Four Recovered with closed pupil but good perception of light.

Five lost vitreous and also recovered with anterior synechia, in one of these the lens was removed with a scoop and a good deal of iritis ensued.

Five perished by acute suppurative panophthalmitis.

The upward incision was made in every instance, with three exceptions.

Slight Iritis occurred in most of the cases in which anterior synechia was present, and also in several of those stated to have recovered without any serious drawback. Twice the lens was removed with a scoop without creating any serious mischief.

The numbers are rather disproportionate for instituting a fair comparison between this method and the former, but if the total number of each be divided into three classes, viz :

Good results.

Indifferent results.

Failures.

The good results including 1st, all those cases in which recovery ensued without serious complication. 2nd, cases in which iritis, &c., was not followed by closed pupil. 3rd, Loss of vitreous without other mishap. 4th, six cases of bleeding into anterior chamber, referred to above.

The indifferent results including all the remainder except those already spoken of as lost, it will be seen that there were—

For the Sclero-Corneal Operation.		For the Oblique Corneal Operation,	
Good.....	87 per cent.	Good.....	86.6 per cent.
Indifferent	5. 5 " "	Indifferent.....	6.6 " "
Failures.....	7. 5 " "	Failures.....	6.6 " "

Thus if great things may be compared with small, it will be seen that a remarkable similarity exists in the results of these two operations.

With regard to the flap and scoop operations, they were so few in number that it seems hardly worth while to do more than mention them.

In seven flap operations six regained useful vision, one left the hospital with closed pupil after severe iritis. Vitreous escaped during the operation twice ; one of these recovered perfectly, the other suffered from hyalitis. The scoop operations, twelve in number, also for the most

part did well. Six recovered without any drawback except a small quantity of lens matter left in pupil in three of them.

Three suffered from slight Iritis.

One from severe Iritis.

Two lost vitreous, but left the hospital progressing favourably.

There is such a vast array of circumstances capable of influencing the result in cataract operations that even the bare mention of them would occupy more of your valuable time than I could ask you to spare, but if the statistics I have just given serve to show anything, it is that the mere choice of operation is on the whole of no great moment, and I have been surprised to find so little difference in the gross results obtained by different methods, as recorded by other observers. For instance, in Arlt's statistics the variations from year to year in any of the three operations which he has practiced most extensively, are often much greater than the difference between the sum total of results in each. Nor is the fact of having obtained 5 per cent. more good results in the total of his linear operations to be regarded as conclusive evidence in favor of this method, since most of his flap operations were performed between 1856 and 1865, but all his Gráfe extractions were done between 1866 and 1873, during which time, according to his own statement, great improvements have been made in his ophthalmic wards.

If, then, there is nothing much to recommend one operation more than another for universal application, how are we to obtain better results in future ?

I think there are at least three ways open, to further improvement.

The first is by paying greater attention to the details of of the operation chosen ; for instance many cases are prevented from doing well by the presence of lens matter, blood, &c., in the eye after the operation has been completed. Then there is the great question of anæsthetics. Some operations fail because the anæsthetic works badly, others,

again, because the patient is too unsteady without it. It would be highly desirable to find some less objectionable anæsthetic than those at present in use, or failing in this, to establish more definite rules for their administration.

Second, by choosing the most suitable operation, for it is certain that some eyes are adapted for one method and some for another. There is undoubtly more risk of losing vitreous by the Gräfe, or the scelro-corneal extraction, than by the oblique-corneal, hence, we should choose the latter where we have reason to suspect a weak zonula. A rigid pupil and a large hard lens call for an iridectomy. In such cases we should not choose the oblique corneal, or if determined to adopt this method, it would be safer to perform a preliminary iridectomy a few weeks before the extraction. The linear method is less likely to be followed by necrosis of the cornea, than where a large corneal flap is formed, hence it should have the preference where there is reason to believe the healing power is defective. The oblique corneal is most easy of performance and will therefore better suit an unskilful operator, moreover, it can be done without the aid of an assistant. These are only some of the points to be taken into consideration, but there are many others.

Delayed union is, I am inclined to believe, more commonly met with in the sclero-corneal extraction as figured in the diagram, than in either of the two other incisions. This is proably due to the narrowness of the surface in coaptation at the upper part of the incision caused by cutting too much forward, and to the fact that the upper lid no longer serves to press the cut surfaces together.

Third, in the matter of after treatment, for here there is is still a good deal of difference of opinion. Some surgeons prefer to use no bandage after the operation, others keep the eyes covered with charpie or cotton wool and an elaborate bandage for several days. Some prefer dry dressing, others moist. When to interfere, if the case is not doing well, and to what extent interference is justifiable, often become

most anxious questions. For my own part I believe that excessive reaction can be controlled with something like absolute certainty if combated in time by local depletion and sedatives.

Direct interference with the eye itself, is, I think, only justifiable under exceptional circumstances. Though I admire the boldness of those who make an inspection by focal illumination twice daily, and hope that this zeal in the cause of science may be rewarded by the discovery of improved means for regulating the after treatment, I prefer for the present to act upon the principle of letting well enough alone for a few days at least,

I have more than once succeded in achieving very good results in apparently desperate cases of suppurative iritis after extraction, by means of an apparatus which I have had constructed for supplying cold or heat in a uniform manner to the eye. One such case thus treated by warm fomentations recovered speedily, and ultimately obtained vision = ⅔.

I am often asked which is the best operation for the removal of cataract. The question is difficult to answer; for although I should give the preference to a scleral extraction with iridectomy, very like that of Von Gräfe, if restricted to a single method, there are undoubtedly many cases better adapted for some other kind of operation. I am therefore of the opinion that in the long run the greatest measure of success will fall to the lot of those who make themselves thoroughly familiar, not with one method of extraction, but with several, and who by taking into full consideration the details of each case are led to form a correct judgment in regard to the course to be pursued; just for instance as in general surgery, no one would think of advocating circular amputation to the exclusion of all other methods, or lithotomy to the entire exclusion of lithotrity.

The public generally, seems to be under the impression that a very advanced age is a strong contra indication to operative interference in cases of cataract.

This belief is not by any means confined to the laity, but exists to an almost equal extent amongst medical men, and is often the means of witholding from the aged and infirm the priceless blessing of that sense which most of all serves to sustain the waning powers, and cheer the evening of life. In conclusion, let us hear what our statistics have to say upon this point.

Of the 510 cases, 116 were 70 years of age and upwards. In 94 of these the result of the operation was good, in 12 indifferent, in 10 it was a failure. The indifferent results and failures were in great part due to some mischance during or after the operation, and in so far only attributable to the advanced age of the patient as that such persons are more lacking in self control than in earlier life. I have more than once seen useful vision restored by operation in persons bordering on niney yeaits of age.

A Case of Acute Glanders. By JOHN REDDY, M.D., L.R.C.S.I., &c., Physician to the Montreal General Hospital.

(Read before the Medico Chirurgical Society, Montreal, 1876.)

On the 14th November, 1875, I was requested to see John G——, practical engineer, a stout, well-built man, who has always been in the enjoyment of good health. For over a year past he was engaged at the Moisic Mines as General Superintendent of the Mechanical Department, and was never ill during that time. States that he left the mines on the 3rd November, 1875, in good health, and arrived in Montreal on the 5th November, 1875, and was then, as he thought, in good health ; but on the 9th he felt poorly, experiencing peculiar sensations about his limbs and body not of a painful character, but producing a kind of uneasiness. As they did not last long, he paid no particular attention to them. These continued more or less to the 13th (yesterday), when he was seized with a severe rigor high fever and profuse sweating. I found him in

bed, lying on his back, with a disinclination to assume any other position ; his face was slightly flushed, had headache and hot skin, pulse 100, and temperature 100 2-5, tongue clean. His bowels were regular, but he complained of shooting pains on the outside of his arms and legs and right scapula. He had much thirst, and was constantly sipping black currant-jelly water ; there was neither cæcal gurgling nor tenderness. His lungs were unaffected, but his respirations were hurried. His intellect was perfectly clear. With the above history, I predicted that most probably it might prove to be typhoid fever, and prescribed a mixture with liquor ammonia accetatis, cold evaporating cloths to his head, milk and beef-tea diet.

15*th*.—Found him a little better to-day : tongue clean, pulse 100, temperature 99 3-5. Other symptoms very much the same as before ; the headache had returned. He also complained of soreness and dryness of throat ; but unless slight congestion of the tonsils and mucus membrane of the throat generally, there was nothing else to note in that region. His bowels have not been moved to-day.

17*th*.—I was to have had a message yesterday if any change had occurred. Receiving none, called this morning, when I found him bathed in the most profuse perspiration I have ever witnessed. The following account was then given me :—About midnight he had a severe rigor, followed by a period of chilling, severe sensation of cold, which lasted over two hours ; then his skin became burning hot and dry, which lasted nearly three hours ; and lastly, the intense profuse sweating I found him in commenced. I now banished the idea of typhoid fever, presuming I had to deal with intermittent, as he reminded me that eighteen years previously I had treated him for an attack of tertian ague. I immediately ordered quinine in mixture when the fit had subsided—the first dose to be twenty grains, subsequent ones five grains—every four hours afterwards, till relief came.

19*th*.—I again called. He had another lesser attack yesterday, and to-day he drew my attention to a globular swelling, about the size of a goose-egg, under right clavicle extending down to margin of third intercostal space. This had arisen through the night; was exceedingly painful and tender to the touch. I ordered it to be painted with tincture of iodine, and warm linseed meal poultices applied.

20*th*.—A very slight chill occurred during the night. Pulse 92; temperature 99 1-5. He complains very much to-day of weakness and pain of a general character, throughout his body and along his arms and legs. He has much thirst and occasional fever. The poultices and iodine paint have relieved the painful swelling on the chest; he drinks the black currant water, and takes milk and beef tea freely. Diminished his quinine to-day to two grains every fourth hour.

22*nd*.—Pulse 95. Found him sitting up in an arm-chair in his bed-room. Complains of very great weakness; is perspiring most profusely. The bowels are regular. His tongue is slightly furred, and his throat would feel dry but for the currant water. The swelling on the chest has nearly subsided, and is no longer painful. Ordered a tablesponful of port wine every three hours.

24*th*.—Pulse 100. Still complains of the great weakness, and prefers lying on his back; is very thirsty. Has had no rigors the last two days, but the perspirations are unabated. He looks very ill. A new feature is present to-day. Along both arms from the shoulder to the wrist, and from the hips to the ankles, and on the calves of the legs, say about one inch apart, on rubbing over the parts, hard, well defined swellings may be felt, projecting somewhat from the skin, and about the size of very small filberts. They are most painful to the touch, and here and there small dusky, dry erythematous patches exist. There is no abrasion, and the hard tumours do not exhibit any sign of suppurating. From the tip of the right shoulder, and along the supra scapular region, there is to-day another globular swelling, a

little larger than that which existed on the chest, and equally prinful, for this I ordered the same treatment, poultices and Tincture of Iodine. I felt very much puzzled as to the nature of the case, and again entered upon its history, but failed to obtain any fresh light. From the debility and other symptoms present I began to fear that my case would, after all, turn out to be Trichinosis, but he had not eaten pork for a considerable period, and therefore I had to abandon this idea. I examined the urine this morning, it contained no albumen. Substituted brandy for wine.

25*th*—Pulse 104; temperature 102. He was sitting propped up in an arm chair when I came into his room. Said he felt a little better to-day, but his debility was most marked and perspiration very profuse. The tumour in the scapular region is much relieved by treatment. Continue nourishment egg and brandy as before.

27*th*. Pulse 110; temperature 101. Complains of most severe pain in his arms and legs; can hardly bear to be touched, and wishes to lie undisturbed on his back; seems very much depressed in spirits. The tumor over the scapula mentioned on the 24th has subsided, but a similar one to it has just made its appearance equally large, occupying the crown of the head and a portion of right parietal bone; it is very elastic and most painful to the touch. Ordered the same treatment, poulticing and Tincture Iodine. To-day I observe pink streaks (angeiolucitis) along the line of the lymphatics, passing between or along the line of the hard knotty tumors. These I also ordered to be painted with Tincture of Iodine. Treatment to be continued, and support of every assimilable kind.

29*th*.—Pulse 120; temperature 104. He speaks languidly to-day; complains of very great prostration; is very thirsty, and lies altogether on his back. The tumor on the head has almost disappeared, and the tincture of iodine has somewhat soothed the pains in his arms and legs. The lymphatic inflammation has also faded considerably, but the tumours on the head present no physicial difference.

30*th.*—Pulse 120; temperature 103. No change in the symptoms or disease since yesterday. My friend, Dr. Ross, was associated with me to-day in consultation, and experienced the same difficulty as I had in being able to establish a diagnosis or give a name to the disease, only recognizing its generally septicæmic character; a few dark patches of an erythematous character, are here and there observable on the arms and legs and one on the right knuckle between first and second finger which is the largest.

Muriated tincture of iron in thirty drop doses has been added to the quinine mixture to-day, and supporting the system by every available method advised.

Dec. 1st.—Pulse 120; temperature $102\frac{3}{5}$; debility very manifest, and the prespiration profuse. To-day a number of vesicles have appeared on the arms and shoulders, which in the course of a few hours quickly became pustular. They are not unlike small-pox pustules, in the centre the appearance is like thin pus, around this there is a fluid like lymph and a base or margin of a pinkish color. They make their appearance in crops few in numbers, as described above, in the course of four or five hours. I cannot say that the treatment has had any special effect in causing any alteration in the disease.

2nd.—Pulse 120; temperature $102\frac{1}{5}$. Complains to-day of unusual prostration and of much more pain in the joints and throughout the body.

Four o'clock p.m.—Pulse 120; temperature $103\frac{1}{5}$. No change this morning. The pustular rash was on his face, one large one not unlike a chancre on the side of face near ala of nose on the right side, and a few fresh ones have also appeared. It has also come out on the surface of some of the inflamed patches. Ordered to stimulate freely, &c.

When just about leaving the house his wife stopped us, saying that her husband and she had been considering over his case and its probable cause, and they wished to state that when coming up from the Moisic Mines they had on

board 180 passengers and 14 horses. Ten of these horses were sick with weakness and running from the nose accompanied by a very foul smell—some of them had been sick since the month of June. He was obliged to take care of them himself all the way up. Two horses died and were thrown over-board, and on two occasions he was made to vomit by the stench, on first going into the horses quarters in the morning. We here at once found the missing link supplied, and the nature of the case was now apparent, that it was a case of "acute glanders," and the tumors were farcy buds, now rendering the prognosis most doubtful.

Dec 3rd.—Pulse 120 ; temperature 103 1-5. No change in our patient's state. I examined his urine this morning, it was darker than natural, without deposit ; boiled with nitric acid it turned a beautiful blood red colour, and on settling deposited about ten per cent of an albuminoid substance. There were no salts nor casts, and but few epithelial cells.

4. P.M.—Pulse 120 ; temperature, 103 3-5°. There is very great prostration, most marked as he lies on his back. He suffers greatly from thirst. Complains of pain under his right scapula, has a short cough, and seems oppressed in his breathing. He was too weak to sit up, but on turning him over on his right side dullness on percussion all over right base to centre of scapula exists, accompanied by coarse pleuritic friction sounds, which nearly altogether mask the pulmonary crepitations which may occasionally be heard.

4th.—On calling to-day we found that our patient had died, at 2 o'clock, p.m. After our visit last evening the chest symptoms became worse, his breathing more oppressed ; his strength also began rapidly to fail. About midnight a yellowish fœtid discharge commenced to flow from his nostrils, low, muttering delirium set in, and thus he died. There was no post mortem.

Glanders was known as early as the fourth century, and

was described (though vaguely) by Apsyrtis in the time of Constantine the Great. Its contagiousness was first recognized in 1664, and fully established by Viborg in 1797; and as lately as the beginning of the present century a great difference of opinion existed in France as to the communicability, the Veterinary School of Alfort maintaining its non-contagiousness, that of Lyons the opposite. In 1849 a French veterinary surgeon, Barthelemy, strongly insisted upon its contagiousness, and it was shown beyond doubt, that at this period the yearly mortality amongst the French army horses was something incredible. It had been sought to connect Glanders with Syphilis, Diphtheria, Pyæmia and other kindred diseases, but the researches of Virchow in 1855 to 1863, assigned Glanders to the class of "Granulation tumours"—his views were confirmed by the brilliant researches of Leisering. Experiments have been made at various times to excite the disease in horses by inoculating with pus and other like substances, but without success—while the smallest point of pus, or even sweat from a glandered horse placed in the nostril of a healthy horse will excite the disease; a few exceptions, however, have occurred. It is a very infectious disease, and the term "volatile infectious matter" has been used but not to infer that it is gaseous, but light and corpuscular so as to be carried a considerable distance. The nostrils, larynx and lungs form the direct channels by which the disease enters; it is also communicable where a wound or abrasion exists. The virus when exposed to a temperature of 103 Fahr. ceased to exert any infecting power. A parasitic growth, named Puccinia, a supposed cause, has been discovered by B. Langenbeck; it is found, however, in the nasal secretions, and in the fodder, but lower organisms have been discovered. Bacteria, found in men and horses affected with glanders, Kiener, Hallier, Zurn and Riendfleisch all describe this parasite as existing in the blood, pus, ulcers and abscesses of the lower animals. Asses, mules and sheep are most susceptible of this disease, and in the order mentioned. It prevails alike

in hot and cold climates. A severe epizöotic occurred from 1808 to 1816, which carried off 20,000 horses. In Hungary in 1812, 12,000 horses died, no precautions being taken as the disease was not even suspected to be contagious.

The disease manifests itself in two distinct forms, which are, however, only types of one and the same disease. The first attacks the nose, lungs and neighbouring glands, and is what is called "Glanders Proper." The second affects the absorbents, or lymphatics of the skin of the extremities, or trunk, causing a corded knotty condition known as "Farcy," or "Farcy Buds." The disease appears in from three to six days.

Youatt gives as the earliest sign of the disease: Nasal discharge; first limpid, then sticky and gluey as the disease advances; lastly very offensive. Farcy, he describes as has been already stated.

Formerly the nodules of farcy were considered to be deposits or exudation from the blood, but Virchow, in 1854, demonstrated their neoplastic origin, which view was confirmed by Leiserurg, Foster, and others. In horses a symmetry exists in the manner in which the lymphatics are affected, and in my case the same character obtained.

In man, the two diseases are generally associated, commencing as acute glanders, and followed by farcy, or *vice versa*, and is most frequently attended with an extensive tubercular eruption of the skin of an exanthematous character.

The commencement of the disease is characterized by wandering pains, much fever, great depression, chills and pains, that might easily be mistaken for rheumatism. A fever not unlike typhoid is present, followed by rigors and most profuse, perspirations later on the eruptive stage sets in, which in chronic cases may be delayed for weeks. The most prominent, however, is the glanders eruption, consisting of crops of pustules little differing in appearance from variola. Virchow, however, states that they do so in this respect; they consist of a firm tenacious deposit in

the corium of the skin of a whitish or yellowish material over which the epidermis passes, after a longer interval softening takes place, and small holes are left filled with debris. They very often form in the calf of the leg and on the back, forming very hard masses which frequently escape notice till after death. The discharge from the nose may be late in coming on, being often more apparent than real, as should the patient be in the recumbent posture it may flow down the posterior nares and thus escape detection. The constitutional symptoms near the close are very severe and attended with great exhaustion. The duration of the disease in its acutest form is from three days to three weeks.

In the above summary of the symptoms and signs of this disease, you cannot have failed to recognize the great similarity that exist between them and the case I have brought under your notice

Pathological appearances onthe mucous membrane of the nasal cavities and throughout the lungs viewed by the naked eye, are deposits described as of a tubercular appearrance like miliary tubercles, but under the microscope they merely consist of vascular delicate stroma, filled with round cells like pus cells.

The infiltrated form of glanders (or diffuse form), in many respects, resembles ordinary inflammatory processes having an excess of cellular elements and gangrene of the tissues, recognizable by superficial formation of ulcers, and also of cicatricial tissue ; and in the veins of the erectile tissue of the septum nasi extensive thrombi in these vessels occur, which gave rise to the idea that acute glanders is nothing more than phlebitis of the nose, which idea was exploded by the researches of Virchow. The lungs are in this form particularly liable to inflammatory exudations, more particularly in their anterior and lower edges ; but this state is oftener met with in the chronic or subacute form of the disease.

Virchow also asserts that the lesions of the lungs form,

as a rule, the final phenomenon of the disease. Bollinger denies the correctness of this opinion, and opposes it; but in my case the pleura and lungs were only invaded at the close, in this instance substantiating that statement.

The deep interest which attaches to this case and its rarity, as well as the great difficulty that for several days occurred in arriving at a correct diagnosis, has induced me to fully report all the details I could glean, even at the risk of perhaps occupying too much of your valuable time. I have looked into the history of glanders, and have consulted several authors. Some give it but a passing notice. I am indebted to Bollinger for his exhaustive article on the subject in *Ziemssen's Cyclopædia*, vol. 3, on Chronic Infectious Diseases; also to articles of a similar kind in *Reynold's Practice of Medicine* and *Holme's Surgery*.

I am not aware of a similar case being recorded in any of our periodicals here; but I find, on looking over the Mortuary Returns for 1875 of the city and suburbs of Montreal, three cases are reported as having occurred,—and it is much to be desired that the medical gentlemen who have observed the other two cases may also place them on record.

Since reading the above I have discovered, on looking over the British American Journal, for 1845, vol. 1, Edited by A. H. Hall, M.D., and R. L. Macdonnell, M.D., a case of Glanders reported by the late Dr. Smallwood, of Isle Jesus, which was recognized as a case of acute Glanders from the very commencement; it ended fatally, and was contracted by attending to glandered horses.

Montreal, February, 1876.

TRANSLATION.

The treatment of Polyarthritis Rheumatica by Salieylic Acid.

By Dr. Stricker, Physician to the Charité Hospital, Berlin.

For several months past all the cases of acute articular rheumatism, with well marked local disturbance, taken into the Charité Hospital under Prof. Traube, have been treated

with Salicylic Acid. In every instance not only was the temperature reduced to the normal standard within 48 hours, but what is far more important, all the local phenomena such as pain swelling and redness of the joints were completely relieved.

This mode of treatment is efficacious only in the class of cases just indicated; it is of no avail unless swelling and redness of the joints exists.

In order to insure success the following rules for administering the acid must be strictly observed.

The Salicylic Acid must be pure; that is to say, it must be in the form of glistening white acicular crystals which are quite odourless and form a clear solution in water or alcohol. Impure Salicylic Acid is mueh more likely to act as an irritant to the mucous membrane of the mouth throat and stomach.

The powdered acid must be given in doses of from 8 *to* 16 *grains every hour.* It is best given in capsules. *It must be given till the affected joints can be moved without causing pain.*

To obtain this effect the quantity administered never exceeded half an ounce, and was never less than eighty grains.

There is no doubt it would be safe to administer more than 240 grains, since one patient took of his own accord, as much as 350 grains within twelve hours without experiencing the slightest inconvenience, on the contrary his tongue cleaned and appetite improved. The only toxic effects noticed in any of the cases treated were sweating, singing in the ears, partial deafness, and in a few instances slight hilarity.

Nothing definite can as yet be stated, in regard to the effect of salicylic on the secondary inflammations of rheumatism; most of the cases treated had already suffered from endocarditis. It is probable that after the cure has been effected the patient would do well to continue taking the acid in smaller doses, for a short time at least.

The details of five cases are given, but the course of the disease and result of the treatment was almost exactly the same in the remaining ten cases.

1. *Polyarthritis rheumatica. 3rd attack.—Complete recovery in twenty-four hours.*

R. W., æt 25, painter by trade, has insufficiency of the aortic valves. Was taken ill Dec. 6th, 1875, with swelling and pain in the left ankle joint; admitted into the hospital Dec. 10th. It is probable the heart affection, dated from his first attack of rhumatism in 1870, for he has been subject to palpitation ever since.

There was no evidence of recent endocarditis. The treatment was expectant until Dec. 13th, when the temperature rose to 104.9. Several phalangeal joints of the left foot, the left knee, shoulder and wrist became swollen and slightly reddened, and at the same time exceedingly painful.

Salicylic acid was now administered as recommended above. On the morning of Dec. 14th he had taken 80 grs. Most of the affected joints already presented almost a normal appearance. The patient could move his left hand quickly to and fro without the least inconvenience. There was still slight redness and tenderness on pressure at the inner side of the left knee. Salicylic acid was therefore continued till he had taken 150 grains. At nine o'clock the same evening all the joints were free from the disease. During the previous night, tinnitus, hardness of hearing and sweating had come on and had somewhat increased during the day.

He had not suffered at all from heat or dryness of the throat, difficulty in swallowing or nausea; nor was the epigastrium in the least tender on pressure. The patient remained a few days in the hospital, but without any return of the rheumatism.

2. *Polyarthritis rheumatica cured within forty-eight hours. Endocarditis, when admitted; this was not influenced by the treatment, and gave rise to slight insufficency of the mitral*

valve. Pericarditis became developed at the outset but disappeared under the use of the salicylic acid.

O. R. æt 16, waiter.—Admitted Oct. 25th, 1875, was taken ill on the evening of the 20th. The disease is said to have commenced with a rigor. On the following day both hip joints, and soon afterwards all the large and several of the smaller joints were attackted with violent rheumatic pains.

On admission all the large joints of the lower extremities were considerably swollen and very painful, more particularly, those of the right side. There was also endocarditis of recent origin. Salicylic acid was administered without delay. The following morning at 8 o'clock the patient had taken 80 grains. Both ankle joints and the left hip joint could already be moved freely without exciting pain. The conditon of the knees and right hip was not materially changed. Auscultation now revealed for the first time, a friction murmur which coincided with the movements of expiration and inspiration; it was best heard to the left of the sternum on a level with the fourth costal cartilage, and was undoubtedly due to an affection of the pericardium. Under the continued use of the salicylic acid there was so much improvement that on the evening of the 27th, (240 grains having been taken) patient could move all the joints readily; there was no swelling, and no pain on pressure. The friction murmur had also disappeared. The medicine had caused tinnitus, hardness of hearing and sweating.

The area of præcordial dullness and the heart sounds remained unchanged. Patient was discharged about the middle of November completely cured, with the exception of a slight mitral insufficiency.

3. *Subacute polyarthritis rheumatica with very slight increase of temperature. Acute attack whilst in hospital, rapid increase of temperature together with great swelling and pain in certain large joints. Cure within twenty-four hours.*

H. A, æt 34 locksmith.—Came to the hospital Dec. 9th,

on account of pain in many of the joints, for which he had been treated at home with tincture of iodine, blisters &c., applied to the affected parts. The condition of the joints did not seem to invite the use of salicylic acid and the patient was put upon a solution of nitrate of potash which he continued to take till Dec. 12th.

On the morning of the 12th the carpo-meta carpal joint of left thumb was found to be greatly swollen. The left thumb was swollen stiff and exceedingly painful. The right wrist joint was beginning to swell. This swelling involves the whole of the back of the hand, which is also very much reddened. The fingers can be moved but very little, the wrist joint not at all, on account of intense pain caused by any attempt at movement. Circumference of right wrist joint 3 cm ; greater than of left. The knees, shoulders and elbow-joints are also painful, but less so than the wrist.

Patient now commenced to take salicylic acid in doses of 8 grains every hour. At four o'clock of the same day he could move most of the affected joints with much greater facility. The swelling, &c., of the left thumb was greatly reduced. The thumb could now be moved tolerably freely, as could also the right wrist, which was also less red and tense, but still swollen to about the same extent.

The amount of salicylic acid taken was then 60 grains. The following morning he had taken 120 grains of the acid and was entirely cured. In this case no heart complications occurred.

4. *Polyarthritis rehumatica. Great local disturbance. Cure within twenty-four hours.*

E. D. æt 21, barmaid.—Admitted Dec. 15th, after having been confined to her bed fourteen days ; was immediately put upon the salicylic acid treatment. She was then suffering from high fever, loss of appetite and violent pains in the left wrist and both knee joints, which were greatly swollen, red and tender to the touch. The joy of this patient is better imagined than described, when after taking nine doses of the acid of sixteen grains each at intervals of

one hour, she found herself completely restored to health. No tozic effects of the medicine occurred.

5. *Polyarthritis rheumatica. Two attacks. The first cured in forty-eight hours. The second in twenty-four hours.*

W. T. æt 36, journeyman tailor.—Was suffering when admitted from an acute rheumatic inflammation of all the large joints, and nearly all the small joints of the hands and feet. He took the acid, but not according to directions, so that from the evening of the fifth to the evening of the seventh only 130 grains had been administered. Notwithstanding this I found him free from pain on the morning of the eighth.

Patient left his bed Oct. 9th, but on the 17th a fresh attack occurred, in which there was great increase of temperature, and severe inflammation of the right wrist and knee joints. On Oct. 18 he took 80 grains of the acid which sufficed to effect a cure. He was discharged from the hospital, well, on Oct. 28th.

F. B.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Suppurative Pyelitis—Sinuses Opening Internally, and communicating with Pelvis of Kidney. Under DR. FENWICK. Reported by J. D. CLINE, A.M., M.D.

S. L., æt. 34, labourer, was admitted into hospital on February 1st, 1876.

Two years ago his trouble began with pain in left loin, and subsequently frequent micturition and passage of pus and blood occasionally with his urine. A swelling occurred in the loin, which was opened fifteen months ago. A drainage tube was introduced while he was in another hospital, and there has been a discharge from the two openings ever

since. At present he has to make water every hour at least, and more frequently at night. The pus in his urine is very thick, ropy and greenish. The patient is much reduced in flesh and weight; appetite pretty fair. One opening is about 2½ inches above the middle of the crest of the ilium, and the other 1 inch in front of the anterior superior spine of the ilium. These were found to communicate with each other, and a probe through the upper one could be passed down very deeply. Dr. Fenwick judged from the character of the pus in the patient's urine that it came from the pelvis of the kidney, and also from the history of the case, the directions of the sinuses and the fact of their not having tended to heal in so long a time that the sinuses communicated with the pelvis of the kidney. The Doctor introduced a drainage tube, and ordered for the patient Iron and Quinine, Cod-liver oil, and a nutritious diet, with one pint of ale daily.

The patient's condition remained apparently the same till the 15th of February, when he complained of a sore throat, and at the same time rapidly became very much prostrated. As there had recently been a case of diphtheria in the hospital, his throat was carefully examined lest this should be another. No trace of diphtheritic membrane was found. The tonsils and soft palate were red and swollen. He was ordered a gargle of Tinc. Ferri, Mur. ℥ij to aquæ ℥viij and the following Mixture:

℞ Pot. Chlor. ℈i; Tr. Ferri. Mur. ℥ij; Quinae grs. xii; Aquæ ad ℥vi; of which he was to take a tablespoonful every three hours. He was also ordered 6 oz. brandy daily. The soreness of his throat was much relieved next day, but he gradually became weaker, and died on the 17th.

Autopsy 12 hours after death,—Cadaveric rigidity well marked. Body extremely emaciated and anæmic.

Lungs contained several nodules, which were caseous in their centres. Heart flabby. Valves healthy but coronary arteries very hard. Liver very much enlarged, weighing 6 lbs, presenting the appearance of amyloid disease of that

organ, and yielding the characteristic reaction with iodine. Spleen large and hard, weighing 9 ounces, also amyloid. Right kidney large, weighing 8 ounces, and amyloid. The arteries also hard and rigid. When the bladder was removed and the left ureter was dissected up to the kidney, the latter was found to be firmly adherent all around by inflammatory tissue. In removing it a portion tore near the entrannce of the ureter, and allowed some pus to escape. This vent was found to communicate with a sinus reaching through the muscles of the loin. This sinus was then opened up with the knife and found to lead to the external openings. The walls of the bladder were thickened. The bladder contained a quantity of putrid pus, and its walls internally were softended and sloughy. The ureter was as large as a man's finger and its canal very large. The pelvis of the kidney was filled with thick pus, and the pyramids were entirely broken down and their places filled with thick pus, and communicating with rent spoken of above.

Case of General Tuberculosis—Tuberculosis Uterus—Death from Meningitis—Autopsy. Under the care of Dr. Fenwick. Reported by J. D. Cline, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

Louisa Sovereign, aged 26, was admitted into hospital, Jan. 5th, 1876. She complained of a slight leucorrhœa, amenorrhœa and general dibility. She had been in hospital for the same thing eight or nine months ago under Dr. Reddy. At that time she was very emaciated and a very delicate looking girl. By examination with a speculum the os uteri appeared natural—perhaps small. The uterine sound was not used. At this time the patient suffered a good deal of pain in the back and tenderness over body of uterus. No enlargement of body was detected. A vaginal injection of zinc : sulph : was ordered her with rest in bed and a general tonic regimen. After two months treatment she improved very little, and was taken down to

the salt water by her friends. The pain had disappeared, however.

The patient was a small woman of very frail build, unmarried, and a virgin. No history of tuberculous taint in the family could be made out, but one of her sisters, was dwarfed by a curvature of the spine. When in hospital the first time she had no cough and her lungs were not examined. On her admission the second time she was much more emaciated than before and more feeble. Still the only thing she complained of was her uterine trouble. Nothing more was made out about her uterus than before. A vaginal injection of zinc : sulph : was ordered, and a tonic of iron and quinine. When she had been in hospital a short time the nurse called Dr. Fenwick's attention to a cough which she had, and on examination there were found evidences of tuberebcle and softening all over the lungs. The respiration was very harsh, creaking and leathery, with prolonged inspiratory murmur all over the chest and a few moist rales at parts. The note in percussion was equal on both sides but tubular. Dr. Fenwick ordered cod liver oil and a sedative cough mixture. On Jan. 26th the brain symptoms set in. She became sleeples, restless and nervous, starting every now and then and afraid to be left alone. On the night of the 27th this restlessness increased, and she would start frequently with a peculiar cry. I immediately suspected tubercular meningitis, and found at that time the macula cerebri of Trousseau well marked. Her bowels were constipated. There was no vomiting. On the third day after the appearance of these symptoms there was strabismus of of the right eye. She was gradually becoming comatose, and on the fifth day could not be roused at all and could scarcely be got to swallow a spoonful of nourishment. Her sphincters became relaxed. Before this stage she had complained of pain in the occipital region, and her head was constantly retracted. She gradually sank and died on Feb. 4th, at 11:15 p.m.

Autopsy.—Two hours after death the brain was first examined, and the ventricles opened before it was removed.

There were eight ounces of fluid in the ventricles, which were very much distended. There was no central softening, except in the septum lucidum. The surface of the brain was congested especially at the base. The membrane here was much thickened and opaque and studded with miliary tubercle in the central portion, as well as in the fissures. There were three or four purulent deposits under the membrane. There were several nodules of tubercle in the substance of the brain, varying in size from that of a split pea to that of a bean; one in the left thalamus opticus, one in the anterior lobe of right hemisphere at base, one in upper surface of cerebellum and another in the posterior and inferior part of left hemisphere.

The Lungs were found to be studded with tubercle of the grey variety in various stages of degeneration in parts. Nowhere was there a cavity larger than a bean. Nodules of tubercle were found in the capsule of the liver.

Kidneys were healthy.

The Uterus.—The body of the uterus, before removal, felt enlarged and soft, and was rather firmly fixed by peritonitic adhesions. On section after removal the cavity was found to be large—about 2 inches long by 1½ inches wide, and the internal surface presented a ragged ulcerated appearance, like the sac of an old abscess. It was of a dirty greyish color and covered with a tenacious discharge. Yellowish cheesy-looking projections extended into the walls of the uterus. The walls were soft and friable. The right wall particularly was so soft that a probe could be easily thrust through it. The whole muscular structure here appeared to be degenerated. The ovaries presented much the same appearance, ulcerated and degenerated internally. There was a cyst as large as a walnut on the right fallopian tube.

Remarks.—From the history of the case, there having been no evidences of tubercle in any organ but the uterus till recently, and from the post mortem evidences of the tubercle in the lung and elsewhere being recent while the uterus was in an advanced stage of degeneration, it appears that the tubercle must have been primary in the uterus.

Reviews and Notices of Books.

Annual Reports on Diseases of the Chest. Under the direction of HORACE DOBELL, M.D., Consulting Physician to the Royal Hospital for Diseases of the Chest, &c., &c., assisted by numerous and distinguished coadjutors in different parts of the world. Vol. 1, June 1st, 1874, to June 1st, 1875. London: Smith, Elder & Co., Waterloo Place, 1875.

We have acknowledged the receipt of the above work and at the same time drew our readers' attention to the plan which the author proposes to himself to follow, and desire to add now a few more words, to explain more fully the nature, of the contents and their value.

Dr. Dobell, who is already well known from his various writings, as one who has for a very long period devoted his attention to Diseases of the Chest, has for the purpose of compiling the work, been in communication with eminent physicians in every quarter of the world. It can readily be understood, therefore, what a large accumulation of material has been placed at his disposal. Indeed it would hardly be saying too much to say that every observation, investigation, or idea of any importance, which has been anywhere brought to light within the contained year, finds a place in these pages. Of course the field is an immense one, and includes considerations regarding a very large number of different complaints. Remarks and reports of cases are to be found bearing upon the pathology, etiology, diagnosis, treatment, mode of distribution, &c., of the tongue, tonsils, larynx, lungs, pleuræ, bronchial glands thyroid and thymus glands, heart, &c. In each section these are carefully arranged, condensed if necessary, and at the same time full references given, so that any given subject can at once be further enquired into by one seeking

the information. The book is also furnished with a very complete analytical index, so that all that in any of the sections bears upon any particular point, can be at once turned up and examined. It is these features in the book itself which gives to it the value it possesses ; because, from its nature, it is of course a book of reference, and it is so constructed as to render this as easy and ready as it is possible to be.

Thoracic diseases afford always and everywhere a very large proportion of all the cases we have to treat, and from the very serious, and often unfortunately intractable nature of so many of them, it behoves every scientific practitioner to keep himself well informed of all the rays of light which are from time to time brought to bear upon them. In accomplishing this he cannot fail to derive great assistance from this compilation of Dr. Dobell.

As we should necessarily expect, the greater portion of the book is taken up with extracts from the leading British Medical Journals, composed of the most interesting cases therein during the time specified, as well as of the most important papers, communications, and discussions which appeared in these journals.

We are glad to find our own country well represented by a report from the pen of Dr. R. P. Howard, embodying the reports of several interesting cases which had been published in our local journals, as well as an excellent paper by the same gentleman, upon the pathology of Tubercle, which was read before the Canadian Medical Association.

Chemica Coartata ; or, the Key to Modern Chemistry.—By A. H. Kollmyer, A.M., M.D., Professor of Materia Medica and Therapeutics at the Uuiversity of Bishop's College; Professor of Materia Medica and Pharmacy at the College of Pharmacy, &c. 8vo., pp. 99. Printed and published by J. Starke & Co., 54 St. Francois Xavier street, Montreal, Canada.

This is a convenient and handy little book of reference containing a large amount of information ready at a

moment's notice, and easy to be reached, and is given in short, terse sentences, intended, as the author says, to be adapted to the wants of students to refresh their memories before examination, and others who have not time sufficient to devote to the searching through larger works. There is a great deal that is useful in the work before us, but we do not quite like the classification of the metals adopted by the author,and think that a classification based more upon their chemical relations to one another, would have been better. As the author classifies them as monads, dyads, &c., he brings together an incongruous mixture of metals, having no bond of union, as the introduction of argentum with the monads, with which it has no relation in common; the characters of the other monad metals are all in relation and might be in a group by themselves, whilst silver would more properly belong to a group of the noble metals.

The potassium group,or group of the metals of the alkalies, are all soft, easily fusible metals, oxidizing readily at all temperatures in the air, and decomposing water at all temperatures—forming freely soluble oxides, which readily combine with water, and form hydrates, from which heat alone will not drive off the water, and their oxides can not be decomposed by heat. These oxides rapidly absorb carbonic acid. The sulphides of these metals are soluble; whilst silver and the noble metals do not oxidize in air; their oxides do not form hydrates; their oxides do not absorb carbonic acid; their hydrates can scarcelv be dried even with great care, and their oxides are reduced to the metallic state by heat alone.

Their sulphides are insoluble.

Similar objections hold good in the other group; among the Dyads,—copper, lead and mercury have no relation to Calcium, Barium and Strontium.

In the Triads: Gold has no relation to Alluminum.

So in the Tetrads—Iron, Nickel, Cobalt and Manganese have no relation to Platinum, &c.

The Pentads do come together better, but among the

Hexads, Molybdenum and Chromium are not naturally associated. There are some things we should like to see a little more fully explained, and some others which we must take exception to. Water is usually described as a colourless not bluish fluid,—whilst Iodine is usually said to be possessed of metallic lustre. Under the head of tests, we find numerous omissions of good useful tests,—such as the omission of the nitroprusside of Sodium as a test for sulphur, after first, converting any sulphur present into an alkaline sulphuret by fusion on charcoal in the deoxidizing flame of the blowpipe, to reduce any sulphate to the condition of sulphide lixiviating the residue and then applying the nitropruside.

The precipitation of Boracic acid by Hydrochloric or sulphuric acid in a strong solution of a borate. The fact that silicic acid dissolves in a sodic carbonate bead, before the blowpipe with effervescence and evolution of carbonic acid, rendering the sodic carbonate bead transparent when cold as well as when hot.

There are other tests the absence of which we notice and suggest that the author should add them:

Under the head of Potassium, the carbazotic acid test is scarcely less delicate than the Tartaric. The introduction of "Chrome yellow cakes at 80°," under the head of Properties, on page 25, of Potassium tetroxide is probably a typographical error, as chrome yellow is a lead salt.

We should fail to recognize the metal Sodium from the Properties on page 39.

Whilst we think that so largely used a preparation as Sodium Hydrated Oxide deserves a larger share of notice than is awarded it, it might have been honoured with a line to itself, and a little more information about its manufacture.

Also under the head of Borax, its old commercial name of Tincal might have been given, and some of its uses as in soldering, and its property of disolving metallic oxides, and hence its use in the Laboratory to form beads before the blowpipe, for testing metallic substances and their compounds.

Under the test for ammonia we should have expected to find that its vapour was aklaline, and that any of its salts warmed with Caustic Potash, Soda, or Lime, yield a vapour with alkaline reaction to litmus and odour of ammouia,—the only alkali volatile at ordinary temperatures, and also that the yellow precipitate formed by silver nitrate was soluble in excess of ammonia.

Under tests for Silver, we should have expected to have the metallic globule obtained on charcoal with carbonate of soda and a blowpipe, characterized as malleable.

Under the tests for alumina we must take exception to the statement that any salt of alumina with cobalt nitrate gives a characteristic blue bead with the blowpipe; before the blowpipe on charcoal in the oxidising flame, salts of alumina leave a white infusible residue of alumina incan descent when in the flame, and which residue, moistened with a solution of nitrate of cobalt, and reheated in the blowpipe oxidizing flame gives a beautiful blue colour to the infusible residue, but does not form a bead.

Under Uranium Salts :

"Borax and Phosphorous Salts with Salts of Uranium will form a green glass," we presume is meant. Borax or Microcosmic Salt, with an Uranium Salt will give a yellow not "green" bead. No mention is made of the colour of the Borax bead formed with Nickel Salts. The use of cobalt in the formation of Smalt blue is omitted, and also the colour of its Borax bead, before the blowpipe.

Under the head of Antimony, Sulphuretted Hydrogen is left out as a test, although it is a test of the group of metals precipitated by that reagent in acid Solutions.

Also the fact that that sulphide is soluble in excess of Sulphide of Ammonium. The same omission occurs as solubility of Arsenic sulphide.

One of the chief characters of Bismuth salts, that they are precipitated by large dilution is not mentioned whilst a black precipitate by sulphuretted hydrogen is given as haracteristic. We thought that lead, copper, silver, &c.,

were also precipitated by the same reagent, the same colour, and under the same circumstances.

There are some other matters we think might be improved.

The latter section devoted to organic Chemistry is very concisely written, and conveys a very good idea of the arrangement of a very intricate subject, altogether we can commend the book to the class for whom it was written. The type is clear, legible and distinct, and for a work of the sort is remarkably free from typographical errors ; we think the shape might be made more in consonance with most libraries, and trust the author may reap a rich reward for his labours in endeavoring "to stimulate students and "others to a more thorough investigation of this noble science."

Periscopic Department.

SURGERY.

Curious case of Mutilation. By OLIVER PENFOLD, M.R.C.S., Eng.

This occurred some months ago, and created a considerable sensation at the time, from the mysterious circumstances surrounding it. As I have not found any similar case mentioned in the text-books I have consulted on the subject, I think it is sufficiently unique to be recorded.

The patient a girl 18 years of age, employed as a barmaid at a hotel, stated that she had washed her hair at ten o'clock at night, and went to bed in an occasional bedroom, not her usual one. It was in a position fairly accessible from the street. She said that she awoke about 3 a.m., and noticed two men covered with crape bending over her and cutting her hair off, her mouth was gagged by a comforter placed over it, and her hands held by the wrists.

She endeavoured to scream, and shortly afterwards the candle was blown out and the men left. She then ran out from her bedroom in her night dress, and rattled a locked door near her uncle and aunt's bedroom, screaming lustily. Her uncle soon came out and found her in a greatly excited state, and crying out that her hair had been cut off. Search was immediately made, but neither the persons alleged to have committed the outrage nor the hair was to he found. I did not see her until some hours afterwards, but her uncle said that the hair had been hacked off irregularly, so as to expose the scalp more or less in different parts. A barber had been sent for, and he had shaved the middle of the scalp, leaving a tonsure of short black hair about two inches long, and over all he had placed a wig of false hair. The shaved scalp was studded with the bases of pimples, whose apices had been removed by the razor. It was a little puffy, and amongst the short hair were a few pimples, presumably like those on the shaved scalp. There were two swollen glands, one on each side of the neck, about the middle of the sterno-mastoid muscle. No marks of violence could be seen on her lips or wrists. She is quite capable of resistance. She trembled greatly while being examined, but told her story in a straightforward manner. She suffers from menorrhagia, and frequent headaches, and is in the habit of sleeping with her face covered by the bedclothes, and is very hard to arouse from sleep. She bears a good character and is habitually temperate. Six years ago, after a fever she had her head shaved. She had fine black hair. On one occasion she walked in her sleep from one room to another. Her sister is a somnambulist. No spite was known to exist against her. The servants who slept in adjoining apartments did not hear any noise before she screamed during the night. The bedroom was examined. No traces of a struggle were visible, and no hair could be found on the pillow or upon the bedclothes. She had borrowed a blunt pair of scissors before going to bed. In front of the looking-glass on the dressing table cover,

was a good deal of short black hair, and there was some on the floor close by.

I believe that she cut off the hair herself, wishing to gains ome notoriety, but finding herself greatly disfigured, she became frightened and made all the disturbance.

Sandhurst, Oct., 1875.

Australian Medical Journal.

On a case of Osseous Tumour, removed successfully, with Antiseptic Precautions, from under the Ligamentum Patellæ. By THOMAS ANNANDALE, F.R.S.E., Surgeon to the Edinburgh Royal Infirmary and Lecturer on Clinical Surgery.

The following case seems to me well worthy of a special report, for two reasons: first, from its great rarity; and, second as an illustration of the value of antiseptic treatment in operations on or near important joints.

D. D., aged 62, was admitted into my wards on the 19th September, last. Three years before his admission, he observed a small swelling at the lower part of the anterior aspect of his right knee-joint, and since then this swelling steadily increased in size, and from its bulk lately became troublesome, and interfered with the proper movements of the joint.

An examination determined the existence of a tumour on the anterior aspect of the joint: it was of the size of two closed fists, was hard to the touch, and was circumscribed and free on all sides except at its base, which appeared to have a firm attachment to the head of the tibia. The tumour when grasped felt quite fixed to the bone when the knee was flexed; but as. in the extended position of the joint, it admitted some lateral movement, it was evident that no real connection to the bone existed. The patella was displaced upwards and inwards, and could be felt immediately above the tumour. The movements of the joint were limited, especially that of flexion. On September 22nd, I exposed the anterior aspect of the tumour by a free incision carried along its outer aspect, and a second transverse and smaller one in a direction inwards across the front of the knee. The first incision was made down to the tumour, in a direction parallel and external to the ligamentum patellæ and patella. The second one was superficial, and only divided

the skin and cellular tissue. The object of these incisions was to thoroughly expose the tumour, and, at the same time, avoid as much as possible injury to the synovial membrane of the joint and to the ligament of the patella. When the tumour was brought into view, it was found that the ligament of the patella was stretched over it, and ran along a groove on its superficial aspect. The tumour had apparently originated in the bursa under the ligament, and the connection of this ligament to the tumour explained its fixed condition, which simulated an osseous attachment. By careful dissection, I succeeded in removing the tumour without injury to the ligament; and, although a large surface of synovial membrane was exposed, the cavity of the joint was not opened into.

The operation was performed under the carbolic spray, and the wound was dressed with the usual precautions. Not the slightest local or constitutional irritation followed the operation, and the patient was dismissed on October 29th, the wound being soundly healed, and the joint and limb perfectly movable and natural in every respect.

Remarks.—From the history and situation of this tumour, I am inclined to think that it originated in connection with the bursa under the ligamentum patellæ. Fibrous enlargements of this bursa have been recorded, but the occurrence of an osseous growth in this situation is not referred to in recent works on surgery. The tumour had no attachment to, or connection with, any bone; and it may, therefore, be classed under those isolated osseous growths sometimes met with in the areolar and other textures, and of which Paget (*Lectures on Surgical Pathology*, 3rd edition) remarks, that they "are interesting for little more than their rarity."

The successful result obtained in this case, and the perfect recovery of the patient with a completely movable joint, must be attributed, in my opinion, to the employment of antiseptic precautions. By no other means do I think that so free an exposure of the synovial membrane could have been made without the slightest irritation resulting. *British Medical Journal.*

Case of Paracentesis Pericardii; Recovery.

The fact that the operation of tapping the pericardium for the removal of effused fluids is still *sub lite* renders the record of every case in which this operation has been performed peculiarly valuable and interesting, whatever the

ultimate issue. In the subjoined case the benefit derived from the treatment was marked, and it is scarcely too much to say that the patient's life was actually saved by drawing off the serous fluid, which was found to measure forty-two ounces.

For the notes of the following interesting case we are indebted to Mr. Thomas Elliot, M.B., late house-surgeon n the Bristol General Hospital.

John M———, aged 60, a carpenter, was admitted into Bristol General Hospital, on April 26th, 1875. Forty years ago he had rheumatic fever, and again two years later. His heart, he stated, was affected two years prior to the first attack. After these illnesses he enjoyed very good health till the close of the year 1874. He served as an "army carpenter" out in the Crimea, where, to use his own expression, he had "a lot of rough work." A month before Christmas, 1874, he was confined to bed for a week with rheumatism. For the two months prior to admission he had been "complaining," and troubled with a cough, and two weeks before admissin his feet and legs began to swell.

On admission there was general anasarca, shortness of breath, and a feeble pulse. Heart-action rapid and irregular, with an indistinct systolic mitral bruit. Lungs anteriorly resonant, posteriorly resonant at right base, dull at left base; respiration exaggerated over right side, tubular at left base

On April 28th the patient was much worse, apparently moribund. Breathing very oppressive, and could only be carried on when the man was lying on the left side, and slightly on his face. The face was of a livid colour; veins in neck full and tortuous, but not pulsating. Heart's apex could not be seen or felt; area of dulness greatly increased, but difficult to define on account of external œdema. The sounds were very distant and indistinct, almost inaudible. Lungs resonant anteriorly and at right base, dull at left base; respiration exaggerated over right side, tubular at left base; no appreciable difference between the two sides in conduction of voice sounds.

From these symptoms and signs Dr. Burder concluded that the patient's great and immediate distress was due to dropsy of the pericardium, and that therefore paracentesis should at once be done. The operation was performed by the house-surgeon (Mr. Thomas Elliot) by means of Dieulafoy's pneumatic aspirator, the needle being inserted between the fifth and sixth ribs, and an inch to the right of

the nipple. Forty-two ounces of clear, pale straw-coloured fluid were drawn off. Towards the close of the operation the apex of the heart was felt to strike once or twice against the needle but it ceased on placing the needle more horizontaly. It is here worth stating, especialy from a practical point, that for cases of paracentesis the needles of the aspirator might with advantage be graduated. At times it is extremely difficult to estimate how far the needle has penetrated, as it was in this case, where there was a considerable amount of external œdema.

The patient expressed himself as easier after the operation,but it was not till some hours after that there was any marked improvement

On April 29th the patient looked much better ; the face was of a better hue, breathing much easier, and he could lie on either side or on his back. Respiration 50 per minute ; pulse feeble. Dulness over base of left lung diminished, and not extending so high upwards. Respiration over same region much more audible, with some moist sounds. Area of heart's dulness definable, sounds not so audible as immediately after tapping. On April 30th the improvement was much greater, the pulse was much stronger, and the general anasarca had gone down a good deal. On May 2nd he said that he had slept but little the last two nights, on account of continued coughing, but the next night he slept much better. On May 3rd he could lie on either side, but said that if he did so he must be well over on his face, but he preferred lying on the left side. Heart-sounds indistinct ; lower extremities more œdematous

From this time he continued to improve, and on May 31st the dropsy had entirely disappeared and the heart's apex could be seen and felt beating about an inch below the left nipple. The area of dulness was definable and greatly diminished ; the sounds were louder, and an indistinct bruit, apparently louder towards the base, but not carried up along the large blood vessels, could be heard. There was still a line of dulness posteriorly at right base, where also the respiration was feeble. After this he sat up daily, but if he made any exertion he suffered at once from dyspnœa, and palpitation. The heart's beat was less distinct and was more to the outer side of left nipple than before ; sounds irregular and confused.

On July 6th he was discharged as an out-patient, much improved, and able to move about more freely.—*Lancet*, Jan. 8, 1876.

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1876.

THE SPREAD OF INFECTIOUS DISEASES IN SCHOOLS.

Some interesting discussion is going on in the columns of some of our exchanges on the subject of the spread of infectious diseases amongst school children, and the best means of preventing such an occurrence. We should suppose that strict isolation and careful cleansing of the premises, is the only means at our disposal. There is no law in this country which will guide the people or force on the people, the adoption of common-sense views on the subject; hence, we constantly hear of small-pox, scarlet fever, measles or whooping cough, breaking out amongst the children of certain public or private schools. Some of these affections are mild in their attack, and somewhat obscure in their mode of propagation; but usually, we feel certain that, if carefully traced, invariably they will be found to originate from some contagious source, at least such is our own experience. Quite recently a little girl showed symptoms of whooping cough, severe in its attack. In the course of a few days three or four other children in the family were similarly afflicted. It was undoubtedly whooping cough, but how had the disease been contracted? After some careful inquiry it was definitely learnt that at the school which this little girl attended, several children had been taken ill and were all afflicted with symptoms of whooping cough. The disease had apparently spread from one to the other with great rapidity. Many instances of the spread of infectious diseases could be enumerated, but they

are sufficently common to be admitted by all. The practical lesson to be learnt by these observations, is the necessity of isolating all children who have been exposed to the contagion of infections disease. In well ordered communities, where sanitary regulations are enforced, if an infectious disease breaks out in a school, a health officer would make it his business to warn the school authorities of the condition of things, and advise that all children suffering from infectious disease, or who had been exposed, should be put on the sick list and perfectly isolated.

ATHLETIC SPORTS.

The London *Lancet* calls attention to the danger attending the game of foot-ball as played at the present day, when the rules of the game as adopted at Rugby are introduced; it states that it is simply an exhibition of brute force, and that a strong, powerful team are sure to be the winners. This would be a matter of small moment were the sport unattended by more serious results, but we constantly hear of broken arms and dislocated joints, and in one sad instance which occurred last summer on the College grouud, a promising young fellow met with so severe an injury that it was followed by peritonitis and death within a few hours. Now we are fully alive to the beneficial results of athletic sports, and believe that they are in every way conducive to health, both of body and mind, but while our young friends indulge in foot-ball and other athletic sports, let those who possess greater muscular power than their neighbors, bear in mind that the human frame is delicate in its construction, and quite open to injury, if excessive force is applied in any particular direction; and also that such injuries may be attended by permanent disablement or death of a fellow mortal. And with regard to those whose business it is to lay down the laws of the game, we should admire their reconstruction so as to expunge all objectionable features. We have thought it well to caution our young friends on this subject as we suppose at the opening of spring, and

with the disappearance of our winter covering, the *green* will exhibit as many merry faces, and the youths and boys of our colleges and schools will be as anxious as ever to devote a portion of their spare time to the customary field sports.

TO CORRESPONDENTS.

We have been requested to pronounce an opinion in reference to the letter which we published in our last, emanating from the pen of Dr. Worthington of Sherbrooke. That gentleman, with his acute sense of the ridiculous, discusses the propriety of smelling the breath in order to make out a brain lesion. Now we feel certain that Dr. W. is the last person who would willingly and studiously offend a fellow practitioner, and in affording our readers a chance of some amusement, he carefully excludes all names, so that the bare facts of the case are given, and they are somewhat amusingly put. But after all there is nothing in the quotation that he takes from a Sherbrooke paper, but what any practitioner might endorse. If the writer believed that alcoholic draughts, little or much, would occasion injury to the brain, we do think that he was perfectly justified in his line of procedure, in order to discover how much of the symptoms present depended on the injuries to the head, which were quite apparent, and how much was due to the free imbibition of alcoholic beverages. If Dr. Worthington will excuse us, the idea is not an original one, it is a process of examination recommended by all the books on the subject.

DEATH OF SIR G. DUNCAN GIBB, BART.

It is with regret we chronicle the death of our old friend and former colleague George Duncan Gibb, which event took place at his residence Bryanston Street, Portman Square, London, England, on Wednesday, 16th February ult, after a lingering illness of some nine or ten months. We have not received any particulars, but some time ago it was announced by the *Lancet* that Sir Duncan, in consequence of ill health, was obliged to resign his connec-

tion with the Westminster Hospital, he having been appointed Physician to that institution on the demise of the late Dr. Anstie. We defer any further notice of our old and esteemed friend until our next issue. Sir Duncan was, we understand, about to have published a new and enlarged edition of his work on diseases of the throat and windpipe. In a private letter which we received from him not very long since, he stated that he was engaged in revising his large work on that subject, and that when published it would be an entirely new treatise.

THE UTERINE ELEVATOR.

There are few diseases of the uterus which so thoroughly incapacitate the female to attend to her daily avocations, or which render life a burthen to herself and those around her, as falling of the womb. This proceeds in a great measure from a relaxed condition of the tissues around. It is a fact that forcible abdominal pressure, as in the act of lifting heavy weights, is attended in the female with a transitory or physiological descent of the uterus; but so soon as the pressure from above is removed the natural elasticity of the parts will enable that organ to regain its position. Frequent repetitions of this process of forcible propulsion of the womb downwards, and inversion of the vagina will be attended by most disastrious consequences. But prolapsus or displacement of the uterus downwards does not only depend on this condition of relaxation of the parts and forcible propulsion. For the relief of this condition various mechanical means have been introduced, and there is hardly a man who has devoted his time and energies to relieve these displacements that has not invented and recommended some form of mechanical support. Very little can be done surgically in the majority of these distressing cases. In noticing the improved Stem Pessary or uterine elevator of Dr. H. H. Burrington, we do so in consequence of having witnessed its beneficial use in a severe case of Procidentia. Our patient had made trial of several supports, but all seemed not to answer her case; we sent for and obtained one of Dr. B.'s instruments, and our patient has had perfect ease and comfort ever since it was applied.

TILDEN & CO.'S
PURE
MEDICINAL PREPARATIONS.
176 William St., NEW YORK.

Laboratory, New Lebanon, New York.

We now prepare the largest variety of remedies from indigenous plants of any concern in the country, These remedies have steadily gained in the confidence of the Profession for the past twenty years, because of their purity, and have become the standard preparations of the country. We call the attention of consumers to the efforts now being put forth to substitute articles or tinctures that are only 25 to 75 per cent. of strength, for the demand which exists for our FLUID EXTRACTS, and which our efforts have created, and desire them to understand that our FLUID EXTRACTS are tested and known to be of the same standard as the drug before being put upon the market, a record of which is kept that we may detect any adulteration, and they can in all cases depend upon that uniformity of strength and action which is so necessary in the use of these remedies.

TWO HUNDRED AND FIFTY KINDS OF FLUID AND SOLID EXTRACTS.

Three hundred kinds of

PILLS, SUGAR-COATED.

Formula for each on the bottle.

One Hundred kinds of Elegant Elixirs. One Hundred kinds of SYRUPS, WINES, &c.

Adapted to the use of Physicians and invalids.

PEPSINE AND ITS PREPARATIONS.

So much used as the Important Digestive Agent in Indigestions, &c.

PEPSINE IN POWDER; PEPSINE LOZENGES; WINE OF PEPSINE;
ELIXIR PEPSINE AND QUININE; ELIXIR PEPSINE AND BISMUUH;
ELIXIR PEPSINE, STRYCHNIA AND BISMUTH, FERRATED.

SYRUP LACTO-PHOSPHATE OF LIME.

Each fluid dram contains 2 grs. Phosphate of Lime, with an excess of Lactic Acid, so prepared as to afford an agreeable preparation.

COMPOUND SYRUP

Lacto-Phosphates of Iron, Lime, Soda, Potassa.

8 grs. Lime, 2 grs. Soda, 2 grs. Potassa, and 4 grs. Iron to each fluid ounce.

Syrup of Phosphates Quinine, Iron and Strychnia and Syr. Lacto-Phosphates of the same.

Each fluid dram contains 1 gr. Phosphate of Iron, 1 gr. Phosphate of Quina, 1-66 gr. Phosphate Strychnia.

PHARMACEUTICAL PREPARATIONS.

ELIXIRS, SYRUPS, SOLUTIONS, TINCTURES, SPIRITS, CERATES, OINTMENTS, WINES, &c.

NEW REMEDIES AND COMPOUNDS.

BROMIDE-MORPHIA, BROMIDE-QUINIA, BROMO-CHLORALUM
ELIXIR IODO-BROMIDE OF CALCIUM COMP.

PRICES will be subject to the changes in the Market. We make none but standard preparations, representing a given quantity of crude material, and cannot be expected to conform in price to those articles which represent by positive examination only *one-fourth* or *one-half* strength, or are mere tinctures. We propose to protect the consumer in this respect, and to him our preparations are practically cheaper than any other, because they are of standard known strength, and give better results in administration.

FOR SALE BY

LYMANS, CLARE & CO.,

Wholesale Druggists, ***MONTREAL***

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PRESCRIPTIONS dispensed in first class style. Physicians supplied with Drugs, Pharmaceutical Preparations and Surgical Instruments at the lowest price for *Cash.*

All the new remedies are added to Stock as soon as introduced.

Jars, Bottles, Labels, Measures, Mortars, Funnels, &c., supplied to order.

Bailey's, Nelson's, and Bullock and Reynold's Inhalers, and Spray Producers, always on hand.

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WHOLESALE AND RETAIL DRUGGIST,

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IMPORTER OF

Drugs, Chemicals, Trusses, Suspensory Bandages, Abdominal Supporters, Umbilical Bands, Silk Stockings, Urinals, Rubber and Porcelain Bed Pans, all Shapes. Spittoons, Drinking Cups, etc., for Invalids, Enema Syringes, every kind.

N.B.—The attention of the Medical Profession is called to the above articles, especially TRUSSES, having one of the largest assortments in Canada.

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A MEDICAL HOME FOR INVALIDS.

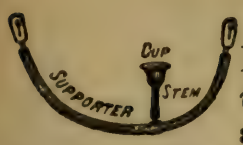
DISEASES of the mind and nervous system; Diseases of women; Chronic diseases. Circulars, with references at office of this Journal.

A. W. THOMPSON, A.M., M.D., (Harv.)

Formerly of Northampton Lunatic Hospital

BURRINGTON'S

Dr. Wadsworth's Uterine Elevator.



The most simple and practical of any Stem Pessary ever invented ; made of India Rubber *without lead*, unirritating, of easy application, and unfailingly keeps the womb in its natural position. The first-class physicians in Providence, and eminent practitioners in almost every State, highly recommend it.

A pamphlet describing it, and testimonials of distinguished Physicians, also Price List, sent on application.

H H. BURRINGTON, Sole Proprietor,
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Trusses, Abdominanl Supporters and Belts,
CHEST EXPANDING SHOULDER BRACES,
Suspensory Bandages, Elastic Stockings, Crutches,
&c. &c. &c.

Artificial Limbs !

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Appliances for the relief of Spinal Curvature, Club Feet, Bow Legs, Weak Ankles, diseases of the Hip and Knee Joints, &c., &c.,

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MANUFACTURER AND IMPORTER OF SURGICAL Instruments, Apparatus for Physical Deformities, Patent Artificial Limbs, Trusses, Abdominal Supporters, Surgical India Rubber, and Elastic Goods, &c., &c.

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VACCINE VIRUS, obtained by the method of True Animal Vaccination, instituted by PROF. DEPAUL OF PARIS, in April, 1866, from the famous case of Spontaneous Cow-pox at Beaugency, in France, and inaugurated in America in Sept., 1870, by

DR. HENRY A. MARTIN,

With Virus and Autograph instruction from the hand of Prof. Depaul. Our establishment is by far the largest and most perfect in the world. Large Ivory "Lancet" points, packages of 10, $2.00. Primary crusts, (scabs), most carefully selected, $5.00.

Points are recommended as by far the most reliable form. All Virus fully warranted efficient. It will be packed to go with perfect safety by mail. Full directions for use accompany each package. Remittance MUST accompany order. Safe delivery of Virus insured.

DR. HENRY A. MARTIN & SON,

BOSTON HIGHLANDS, MASS.

TO THE MEDICAL PROFESSION.

A NEW AND IMPORTANT REMEDY.

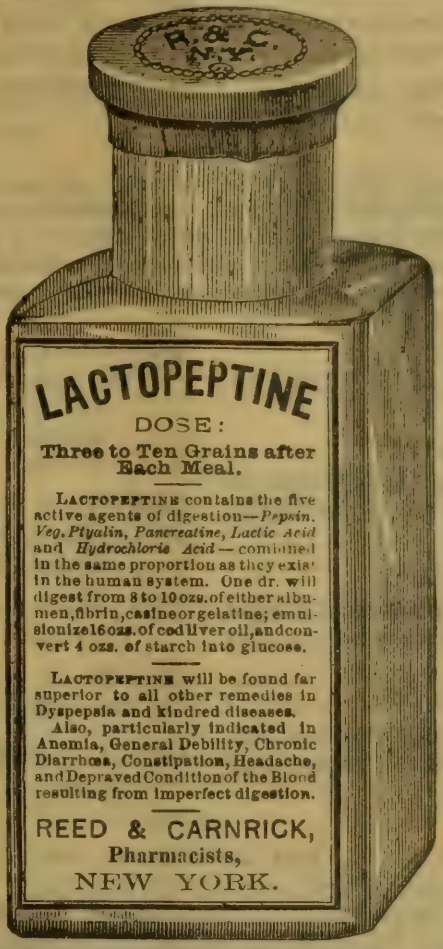
LACTOPEPTINE.

LACTOPEPTINE contains all the agents of digestion that act upon food, from mastication to its conversion into chyle, and is therefore the most important remedy for Dyspepsia that has ever been produced.

The digestive power of LACTOPEPTINE is seven times greater than any preparation of Pepsin in the market, as it has the important advantage of dissolving all aliment used by mankind, while Pepsin acts only upon plastic food.

This preparation has now been in the hands of the Medical Profession for two years, during which time its therapeutic value has been most thoroughly established in cases of **Dyspepsia, Intestinal diseases of Children, Chronic Diarrhœa, Constipation, Vomiting in Pregnancy or Dyspepsia, Headache, and all diseases arising from imperfect nutrition.**

One of the most important applications of **LACTOPEPTINE** *is in those cases where the digestive organs are unable, from debility, to properly prepare for assimilation the remedies indicated. In such cases combine it with the remedy indicated.*

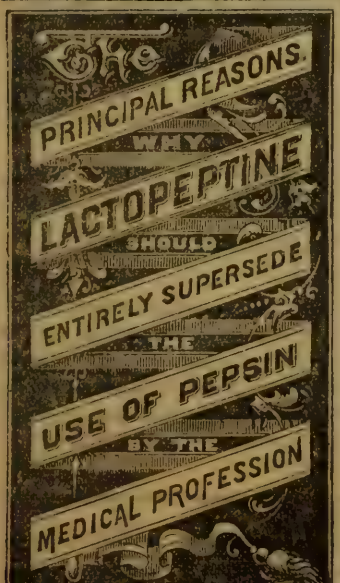

R. & C.
N.Y.
LACTOPEPTINE
DOSE:
Three to Ten Grains after Each Meal.
LACTOPEPTINE contains the five active agents of digestion—*Pepsin, Veg. Ptyalin, Pancreatine, Lactic Acid* and *Hydrochloric Acid*—combined in the same proportion as they exist in the human system. One dr. will digest from 8 to 10 ozs. of either albumen, fibrin, casine or gelatine; emulsionize 16 ozs. of cod liver oil, and convert 4 ozs. of starch into glucose.
LACTOPEPTINE will be found far superior to all other remedies in Dyspepsia and kindred diseases.
Also, particularly indicated in Anemia, General Debility, Chronic Diarrhœa, Constipation, Headache, and Depraved Condition of the Blood resulting from imperfect digestion.
REED & CARNRICK,
Pharmacists,
NEW YORK.

LACTOPEPTINE, *as well as all other preparations of our manufacture, is prepared strictly for the use of the Medical Profession, and is kept invariably in their hands.*

FORMULA OF LACTOPEPTINE.

Sugar of Milk,	. . 20 *Ounces.*	*Veg. Ptyalin or Diastase,*	. 1 *Drachm.*
Pepsin,	. . . 4 "	*Lactic Acid,*	. . 2½ *fl. Drachms.*
Pancreatine,	. . . 3 "	*Hydrochloric Acid,*	2½ *fl.* "

Powder and Mix.



1st.—It will digest from three to four times more *coagulated albumen* than any preparation of Pepsin in the market.

2d.—It will emulsionize and prepare for assimilation the oily and fatty portions of food, Pepsin having no action upon this important alimentary article.

3d.—It will change the *starchy* portions of vegetable food into the assimilable form of Glucose.

4th.—It contains the natural acids secreted by the stomach (*Lactic and Hydrochloric*), without which Pepsin and Pancreatine will not change the character of coagulated albumen.

5th.—Experiments will readily show that the digestive power of the ingredients of Lactopeptine, when two or more are combined, is much greater than when separated. Thus, 4 grs. of Pepsin and 4 grs. of Pancreatine mixed, will dissolve one third more albumen than the combined digestive power of each agent separately in same length of time.

6th.—IT IS MUCH LESS EXPENSIVE TO PRESCRIBE. It dissolves nearly four times as much coagulated albumen as Pepsin, besides digesting all other food taken by the human stomach. *An ounce of Lactopeptine is, therefore, fully equal in digestive power to seven ounces of Pepsin, yet it is furnished at about the same price.*

All the Statements made in this Circular are the result of repeated and careful experiments.

The palatability and digestive power of LACTOPEPTINE has been more than doubled during the past two months, by producing several of its component parts free from all extraneous matter, and we now believe it is not susceptible of any further improvement.

Physicians who have not given LACTOPEPTINE a trial in their practice, are respectfully requested to read the following opinions of some of our leading Practitioners as to its merits as an important remedial agent.

IN ADDITION TO THE FOLLOWING RECOMMENDATIONS, WE HAVE RECEIVED OVER SEVEN HUNDRED COMMENDATORY LETTERS FROM PHYSICIANS, A LARGE NUMBER OF WHICH ENUMERATE CASES WHERE PEPSIN ALONE HAD FAILED TO BENEFIT, BUT FINALLY HAD BEEN TREATED SUCCESSFULLY WITH LACTOPEPTINE.

—oo—

The undersigned, having tested REED & CARNRICK'S preparation of Pepsin, Pancreatine, Diastase, Lactic Acid and Hydrochloric Acid, made according to published formula, and called *Lactopeptine*, find that in those diseases of the stomach where the above remedies are indicated, it has proven itself a desirable, useful and well adapted addition to the usual pharmaceutical preparations, and therefore recommend it to the profession.

NEW YORK, *April 6th*, 1875.

J. R. LEAMING, M. D.,
Attending Physician at St. Luke's Hospital.

ALFRED L. LOOMIS, M. D.,
Professor of Pathology and Practice of Medicine, University of the City of New York.

JOSEPH KAMMERER, M. D.,
Clinical Professor of Diseases of Women and Children, University of the City of New York.

LEWIS A. SAYRE, M. D.,
Professor of Orthopœdic Surgery and Clinical Surgery, Bellevue Hospital Medical College.

EDWARD G. JANEWAY, M. D.,
Professor Pathological and Practical Anatomy, and Lecturer on Materia Medica and Therapeutics, and Clinical Medicine.

SAMUEL R. PERCY, M. D.,
Professor Materia Medica, New York Medical College.

J. H. TYNDALL, M. D.,
Physician at St. Francis' Hospital.

JOSEPH E. WINTERS, M. D.,
House Physician Bellevue Hospital.

GEO. F. BATES, M. D.,
House Surgeon Bellevue Hospital.

—oo—

INEBRIATE ASYLUM, NEW YORK, March 25th, 1875.

I have carefully watched the effects of *LACTOPEPTINE*, as exhibited in this institution, for about six months, especially in the treatment of Gastritis, and it gives me pleasure to be able to say that I have found the best results from it, supplying as it does an abnormal void of nature in the secretions of the stomach. N. KEELER MORTON, M. D.

—oo—

BRANDON, VT., March 31st, 1875.

I desire to say that I have used *LACTOPEPTINE* for a year, not only on my friends, but also in my own case, and have found it one of the most valuable aids to digestion that I have ever used. A. T. WOODWARD, M. D.,
Late Professor of Obstetrics and Diseases of Women and Children, Vermont Med. College.

—oo—

EXTRACT FROM A REPORT UPON THE USES OF LACTOPEPTINE,
BY J. KING MERRITT, M. D., FLUSHING, L. I.

About six months since I saw a notice of *LACTOPEPTINE* and its analysis in a Medical Journal, and having long ago recognized the inability of Pepsin to reach those cases in which the several processes of digestion are all more or less involved, I immediately commenced the use of *LACTOPEPTINE* in my own case. This was, in brief, an inherited, fostered, and persistent condition of General Dyspepsia, which I had treated for several years with Pepsin, finding in its use good service, although the general results were discouraging.

A large proportion of diseases are the result of imperfect digestion.

In all cases when the stomach is unable to digest and appropriate the remedies indicated, they should be combined with Lactopeptine.

The effect of *LACTOPEPTINE* on my powers of digestion has far surpassed my expectations, and its remedial qualities in numerous cases, more or less complicated, have been all that I could desire. In these cases *LACTOPEPTINE* was associated with other remedies indicated, for the purpose of facilitating their assimilation, which is so often nullified by a disordered and debilitated condition of the digestive organs.*

I will now give, in brief, an epitome of a case recovering under the use of *LACTOPEPTINE*. She was a married lady, who five years ago became afflicted with diarrhœa, which had baffled every mode of intelligent treatment. She had an intestinal flux, body much emaciated, and her entire health was greatly impaired. I treated her with *LACTOPEPTINE*, in conjunction with other remedies, many of which had been formerly used without avail. She is now rapidly recovering.

I shall only add that the more my experience, in its varied applicability, extends, the more its beneficial effects appear.

—oo—

NEWTON, IOWA, May 19th, 1875.

I have been using *LACTOPEPTINE* for several months, and after a careful trial in stomach and bowel troubles, find that it has no equal. In all cases of indigestion and lack of assimilation, it is a most splendid remedy. H. E. HUNTER, M. D.

—oo—

WEST NEWFIELD, ME., June 14th, 1875.

LACTOPEPTINE seems to be all that it is recommended to be. It excels all remedies that I have tried in aiding a debilitated stomach to perform its functions.

STEPHEN ADAMS, M. D.

—oo—

WOLCOTT, WAYNE CO., N. Y., June 29th, 1875.

From the experience I have had with *LACTOPEPTINE*, I am of the opinion that you have produced a remedy which is capable of fulfilling an important indication in a greater variety of diseases than any medicine I have met with in a practice of over 45 years.

JAMES M. WILSON, M. D.

—oo—

BROWNVILLE, N. Y., August 3d, 1875.

Some time since I received a small package of *LACTOPEPTINE*, which I have used in a case of long standing Dyspepsia. The subject is a man 40 years of age; has had this ailment over 10 years. I never had so bad a case before, and I have been practicing medicine 21 years. Your *LACTOPEPTINE* seems just the remedy he needs. He is improving finely, and can now eat nearly any kind of food without distress. I have several cases I shall take hold of as soon as I can obtain the medicine. W. W. GOODWIN, M. D.

—oo—

EDDYVILLE, WAPELLO CO., IOWA, May 5th, 1875.

I have used the *LACTOPEPTINE* in my practice for the last eighteen months, and find it to be one of our great remedies in all diseases of the stomach and bowels. I was called last fall to see a child three years old, that was almost in the last struggles of death with Cholera Infantum. I ordered it teaspoonful doses of Syrup of Lactopeptine, and in a few days the child was well. I could not practice without it. F. C. CORNELL, M. D.

—oo—

CORTLAND, DE KALB CO., ILL., August 12th, 1875.

I received recently a small package of *LACTOPEPTINE* with the request that I should try it in a severe case of Dyspepsia. I selected a case of a lady who has been a sufferer over 30 years. She reported relief after the first dose, and now, after using the balance of the package in doses of three grains, three times daily, says she has received more benefit from it than from any other remedy she had ever tried. G. W. LEWIS, M. D.

* We desire particularly to call the attention of the Profession to the great value of LACTOPEPTINE when used in conjunction with other remedies, especially in those cases in which the digestive organs are unable, from debility, to properly prepare for assimilation the remedies indicated.

One drachm of Lactopeptine will digest ten ounces of Coagulated Albumen, while the same quantity of any standard preparation of Pepsin in the market will dissolve but three ounces.

One drachm of Lactopeptine dissolved in four fluid drachms of water will emulsionize sixteen ounces of Cod Liver Oil.

CHILLICOTHE, MO., September 4th, 1874.

I have used *LACTOPEPTINE* this summer with good effect in all cases of weak and imperfect digestion, especially in children during the period of dentition, cholera infantum, &c. I regard it, decidedly, as being the best combination containing Pepsin that I have ever used. J. A. MUNK, M. D.

FORT DODGE, IOWA, November 15th, 1874.

I have fairly tried, during the past summer and fall, your *LACTOPEPTINE*, and consider it a most useful addition to the list of practical remedies. I have found it especially valuable in the *gastro-intestinal* diseases of children. W. L. NICHOLSON, M. D.

WHITE HALL, VA., January 4th, 1875.

A short time since I sent for some of your *LACTOPEPTINE*, which I used in the case of a lady who had been suffering with dyspepsia for over twelve months, and who had taken Pepsin, and other remedies usually prescribed in that disease, with very little benefit. I ordered the *LACTOPEPTINE*, and was pleased to find a decided improvement after a few days, which has steadily increased. At the present time she appears to have entirely recovered. Very truly, E. B. SMOKE, M. D.

INDIANOLA, IOWA, December 11th, 1874.

I consider the *LACTOPEPTINE* a heaven-sent remedy for all digestive troubles. I gave it to a lady troubled with exhaustive nausea and vomiting from pregnancy, with immediate and perfect relief, after all other remedies had failed. She was almost in *articulo mortis*. The third day after taking the *LACTOPEPTINE* she was able to be up. I was called in council the other day to a case of Intussusception; the patient was vomiting stercoracious matter; had retained no nutrition for several days. I gave the *LACTOPEPTINE* with immediate relief. Ingestion was retained. I relieved the bowels by inflation, got an operation, and the patient will recover. I consider the *LACTOPEPTINE* was his *sheet anchor*. I am now using the *LACTOPEPTINE* in Cancer of the Stomach—the only medicine that gives the patient any relief. It seems to act as an anodyne in his case more so than morphine. C. W. DAVIS, M. D.

CONTOCOOK, N. H., November 25th, 1874.

After a thorough trial, I believe *LACTOPEPTINE* to be one of the most important of the new remedies that have been brought to the attention of physicians during the last ten years. I have used it in several cases of vomiting of food from dyspepsia, and in the vomiting from pregnancy, with the best of success. The relief has been immediate in every instance. In some of the worst cases of Cardialgia, heretofore resisting all other treatment, *LACTOPEPTINE* invariably gave immediate relief. It has accomplished more in my hands, than any other remedy of its class I ever met with, and I believe no physician can safely be without it. It takes the place of Pepsin, is more certain in its results, and is received by patients of all ages without complaint, being a most pleasant remedy. I have used *LACTOPEPTINE* in my own case, having been troubled with feelings of weight in the stomach and distress after eating, but always have obtained immediate relief upon taking the elixir in teaspoonful doses. GEORGE C. BLAISDELL, M. D.

MO. VALLEY, IOWA, November 12th, 1874.

Some months since I saw in a medical journal a notice of your *LACTOPEPTINE*. Having in charge a patient in whose case I thought it was indicated, I prescribed it in 5 gr. doses. He used it about a week and was greatly benefited. I failed to procure more just then, so I gave him Pepsin instead, the patient thinking it to be the same prescription. After two days he returned to my office, saying that "the last medicine didn't hit the spot, but that which you gave me last week was just the thing, and has given me more relief than any medicine I have ever taken." I consider this a fair test (so far as it goes) of the merits of this new, and I think, invaluable remedy. G. W. COIT, M. D.

One drachm of Lactopeptine will transform four ounces of Starch into Glucose.

Pancreatine and Diastase are more important digestive agents than Pepsin.

COMMUNICATIONS FROM MEDICAL JOURNALS.

We have for several months been prescribing various preparations of medicine containing *LACTOPEPTINE* as an important aid to digestion. It may be advantageously combined with cod liver oil, calisaya, iron, bismuth, quinine and strychnia. *LACTOPEPTINE* is composed of pepsin, ptyalin, pancreatine, lactic acid and hydrochloric acid—pepsin, lactic and hydrochloric acids being in the gastric juice, ptyalin in the saliva, and pancreatine emulsionizing fatty substances. The theory of its action being rational, we have prescribed the various preparations referred to above with more evidence of benefit than we ever observed from pepsin.—*St. Louis Medical and Surgical Journal*, September, 1874.

AN ARTICLE ON LACTOPEPTINE, BY LAURENCE ALEXANDER, M. D., OF YORKVILLE, S. C., IN THE *ATLANTA MEDICAL AND SURGICAL JOURNAL*, NOVEMBER, 1874.

Some time ago a small box, labelled "Physicians' Samples *LACTOPEPTINE*," was placed in my hands, with the request that I would give it a trial upon some one suffering from dyspepsia. Having, like other physicians, a large *per centum* of just such cases always on hand, in which various medicines and remedies had been used without success, I gladly consented, hoping that something had really been found at last to supply the want felt by every practitioner in the treatment of this troublesome complaint. After several months' experience in the use of this preparation, in which it has been thoroughly tested upon a large number of patients with such gratifying results, I am induced to recommend it to the consideration of the profession, feeling confident that, with due care in their diagnosis, and the many little cautions always necessary, such as restricting the excessive use of fluids while eating, etc., and a little patience on the part of the sufferer, its good effects will be seen beyond a doubt.

While I employ it extensively in many deranged conditions of the bowels incident to infancy and childhood, I find it equally efficacious in constipation and all diseases arising from imperfect nutrition in the adult. In sickness of pregnancy it answers well, far exceeding, in my hands, oxalate of cerium, extract lupulin, or the drop doses of carbolic acid, so highly extolled by some practitioners. In its combination with iron, quinine and strychnia, we have the advantage of using, in cases of great nervous depression and debility peculiar to the dyspeptic, our most valuable agent in a truly elegant form.

TO TEST THE DIGESTIVE POWER OF LACTOPEPTINE IN COMPARISON WITH ANY PREPARATION OF PEPSIN IN THE MARKET.

To five fluid ounces of water add one drachm of Lactopeptine, half drachm of Hydrochloric Acid, 10 ounces Coagulated Albumen, allowing it to remain from two to six hours at a temperature of 105 deg., agitating it occasionally.

Lactopeptine is prepared in the form of Powder, Sugar Coated Pills, Elixir, Syrup, Wine and Troches.

LACTOPEPTINE is also combined with the following preparations:

EMULSION OF COD LIVER OIL WITH LACTOPEPTINE.

This combination will be found superior to all other forms of Cod Liver Oil in affections of the Lungs and other wasting diseases. Used in Coughs, Colds, Consumption, Rickets, Constipation, Skin Diseases and Loss of Appetite.

The Oil in this preparation being partly digested before taken, will usually agree with the most debilitated stomach. Although we manufacture seven other preparations of Cod Liver Oil, we would recommend the above as being superior to either of them. It is very pleasant to administer, compared with the plain Oil, and will be readily taken by children.

EMULSION OF COD LIVER OIL WITH LACTOPEPTINE AND LIME.

Each ounce of the Emulsion contains 16 grs. Lactopeptine and 16 grs. Phosphate Lime.

ELIXIR LACTOPEPTINE.

The above preparation is admirably adapted in those cases where Physicians desire to prescribe Lactopeptine in its most elegant form.

REED & CARNRICK manufacture a Full Line of Fluid Extracts.

BEEF, IRON AND WINE WITH LACTOPEPTINE.

In those debilitated dyspeptic cases when an Iron Tonic, combined with the strengthening properties of Extract of Beef and Wine are indicated, this preparation will be found most efficacious.

ELIXIR PHOSPHATE OF IRON, QUININE AND STRYCHNIA WITH LACTOPEPTINE.

There can be no combination more suitable than the above in cases of Nervous and General Debility, attended with Dyspepsia.

ELIXIR LACTOPEPTINE, STRYCHNIA AND BISMUTH.

A valuable combination in cases of Dyspepsia, attended with nervous debility.

ELIXIR GENTIAN AND CHLORIDE OF IRON WITH LACTOPEPTINE.

An elegant and reliable remedy in cases of Dyspepsia attended with General Debility.

SYRUP LACTOPEPTINE COMP.

Each ounce contains 24 grains Lactopeptine, 8 grains Phosphate of Iron, 8 grains Phosphate Lime, 8 grains Phosphate Soda, and 8 grains Phosphate Potash.

This preparation will be found well suited to cases of General Debility, arising from impaired digestion, and also of great value in Pulmonary Affections.

FORMULÆ.

The following valuable formulæ have been contributed by J. KING MERRITT, M. D., *who has used them with great success in his practice:*

No. 1.—FOR INTERMITTENT FEVER WITH CONGESTION OF LIVER.

℞		
	Liquid Lactopeptine,	dr. vi.
	Fl. Ex. Cinchona Comp.,	dr. i.
	Fl. Ex. Taraxacum,	
	Tinct. Zingiber,	aa dr. iii.
	Hydrochloric Acid Dilut.,	dr. i.
	Spts. Lavender Comp.,	dr. ii.
	Sulphate Quinia,	grs. xl.

M. *Dose.*—One teaspoonful every two or three hours.
SIG.—Quinine mixture or tonic mixture.

REMARKS.

This mixture should be taken every two hours in the case of a quotidian attack, as soon after the subsidence of the paroxysms as the stomach will accept it, or even during the sweating stage, if the stomach is not especially irritable, and should be continued until the hour of anticipated paroxysms at the same rate, except during the night, from 10 P. M. to 4 A. M., as a general rule. Six to eight doses to be taken during the first interval, and if the attack does not recur, then continue the mixture daily for one week, at a rate diminished by one hour each day.

No. 2.—FOR INTERMITTENT FEVER WITH IRRITABLE STOMACH.

℞		
	Liquid Lactopeptine,	dr. vi.
	Fl. Ex. Cinchona Comp.,	dr. i.
	Tinct. Zingiber,	dr. iii.
	Spts. Lavender Comp.,	dr. v.
	Aromatic Sulphuric Acid,	dr. i.
	Essence Menth. Pip. or Gaultheria,	gtts. x.
	Sulphate Quinia,	grs. xl.

M. *Dose.*—One teaspoonful with water *ad libitum* every two or three hours, as in Formula No. 1, and in accordance with the type of the attack. Begin at the rate indicated;

that is, if "Tertian," every three hours, and then after first interval, if the paroxysm does not recur, continue mixture at a diminished rate each succeeding day, as indicated in remarks appended to Formula No. 1, to wit, by increasing the period of time between each dose of medicine an hour every day until a week has passed, when the frequency of dose will be reduced to three times a day, at which rate it should be continued until complete restoration of appetite and strength.

No. 3.—FOR MALARIAL DYSPEPSIA.

℞

Liquid Lactopeptine,		dr. fl. vi.
Fl. Ex. Cinchona Comp.,		
Tinc. Nux Vomica,	aa	dr. xi.
Spts. Lavender Comp.,		oz. ss.
Hydrocyanic Acid Dilut.,		dr. ss.
Syr. Aromatic Rhubarb,		oz. ss.
Sulphate Quinine,		dr. ss.

M. *Dose.*—One teaspoonful with water *ad libitum* at meals (before or after), and *at bed time if required;* also, use in addition after the meals full doses of Pulv. Lactopeptine with Spts. Lavender Comp. and Lime Water, *in case the patient should suffer from positive signs of indigestion, although the dose of Formula No.* 3 *has already been taken at the meal time,* either immediately before or after eating, in accordance with the rule or foregoing instruction.

No. 4.—FOR CHRONIC DIARRHŒA.

℞

Liquid Lactopeptine,	dr. vi.
Liq. Opii Comp. (Squibbs'),	dr. iii.
Nitric Acid Dilut.; or, Aqua Regia Dilut.,	dr. i.
Syr. Aromatic Rhubarb,	dr. ii.
Pulv. Nit. Bismuth,	dr. ss.
Aqua Camph.,	oz. ss.

M. *Dose.*—One teaspoonful with water after each flux from bowels, and as a rule, at bed time, even if the diarrhœa is apparently checked at that hour, and *this rule* should be *persisted in* for two or three days, or until the diarrhœal tendency has been entirely subdued.

PEPSIN—PANCREATINE—DIASTASE.

In addition to *LACTOPEPTINE* we manufacture PEPSIN, PANCREATINE and DIASTASE. They are put up separately in one ounce and pound bottles.

They will be found equal in strength with any other manufacture in the world.

They are all presented in a saccharated form, and are therefore very palatable to administer.

COMP. CATHARTIC ELIXIR.

The only pleasant and reliable Cathartic in liquid form that can be prescribed.

Each fl. oz. contains:

Sulph. Magnesia,	1 dr.
Senna,	2 "
Scammony,	6 grs.
Liquorice,	1 dr.
Ginger,	3 grs.
Coriander,	5 "

With flavoring ingredients.

Dose.—Child five years old, one to two teaspoonfuls; adult, one to two tablespoonfuls.

This preparation is being used extensively throughout the country. It was originated with the design of furnishing a liquid Cathartic remedy that could be prescribed in a palatable form. It will be taken by children with a relish.

MAINE INSANE HOSPITAL, AUGUSTA, Feb. 25th, 1875.

I am happy to say that we are much pleased with the Compound Cathartic Elixir. It has, so far, proved the best Liquid Cathartic we have ever used in our Institution. It acts effectively and kindly, without irritation or pain. H. M. HARLOW, M. D.

Private Formulas of Pills or other preparations made to order.

Strychnia Compound Pill.

Strychnia,	1-100 grain.
Phosphorus,	1-100 "
Ex. Cannabis Indica,	1-16 "
Ginseng,	1 "
Carb. Iron,	1 "

Dose.—One to two.

A reliable and efficient Pill in Anaphrodisia, Paralysis, Neuralgia, Loss of Memory, Phthisis, and all affections of the Brain resulting from Loss of Nerve Power.

Price, 80 cents per hundred.

Sent by mail, prepaid, on receipt of price.

Hæma, Quinia and Iron Pill.

Ext. Blood,	2 grains.
Quinine Sulph.,	1 grain.
Sesqui Oxide Iron,	1 "

Dose.—One to three.

Price, $2.00 per hundred.

Sent by mail, prepaid, on receipt of price.

HÆMA PILLS.

We beg to present to the Medical Profession for their special consideration our several preparations of Blood Pills. The use of Blood medicinally, and the importance of its administration in a large class of diseases, has arrested the attention of many of the leading Physicians of Europe, and has received their warmest attestation. Prominent among these may be mentioned Prof. Panum, of the University of Copenhagen, who is using it with great success in the hospital of that city.

At the abattoir in this city, Boston, and in every part of the country, there can be seen numerous persons afflicted with Pulmonary Affections, Chlorosis, Paralysis, Anemia, and other ailments, who are daily drinking the blood of the ox, and many with more benefit than they have derived from any other source.

The blood used by us being *Arterialized Male Bovine only*, is secured as it flows from the animal in a vacuum pan, and the watery portion (85 per cent.), eliminated at a temperature not exceeding 100° F., the remaining mass, containing every constituent of the blood, being the base of our preparations.

HÆMA (Ext. Blood), 4 grs.

Dose.—Two to four.

90 cts. per hundred.

HÆMA COMP.
Ext. Blood, 2 grs.
Lacto-Phosphate Lime, 1 gr.
Pepsin, 2 gr.

Dose.—One to three.

$1.50 per hundred.

HÆMA, QUINIA, IRON AND STRYCHNIA,
Ext. Blood, 2 grs.
Quinine Sulph., 1 gr.
Sesqui Oxide Iron, 1 gr.
Strychnine, 1-75 gr.

Dose.—One to three.

$2.00 per hundred.

Samples sent to Physicians, postage prepaid, on receipt of price.

LACTOPEPTINE and most of our leading preparations can be obtained from the principal Druggists of the United States.

SUGAR COATED PILLS, TROCHES AND POWDERS CAN BE SECURELY SENT BY MAIL.

Price of LACTOPEPTINE by Mail.

One ounce sent by mail, prepaid, on receipt of	$1 00
One pound " " " " "	13 00

A fraction of an ounce or pound sent by mail on receipt of corresponding price.

We guarantee all goods of our manufacture.

In ordering, please designate R. & C.'s manufacture.

Send for PRICE LIST, DOSE BOOKS and DISCOUNTS.

Oct. 15th, 1875. Respectfully,

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Morson's Pepsine Wine.
Morson's Pepsine Lozenges.
Morson's Pepsine Globules.
Morson's Pancreatine Powder.
Morson's Pancreatic Emulsion.
Morson's Pancreatized Cod Liver Oil.
Morson's Saccharated Wheat Phosphates.
Morson's Creasote (from Wood Tar) the only English makers.
N.B.—Test of purity, insoluble in Price's glycerine.
Morson's Gelatine (The most economical substitute for Isinglass.)
Morson's Chlorodyne.
Morson's Effervescing Citrate of Magnesia.
Morson's Artificial Essences for flavoring.

Sold Wholesale and Retail by all Chemists and Druggists throughout the World.

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Absolute Security — Non-Forfeitable Policies -- Moderate Rates — Prompt Settlement of Claims.

The result of the recent valuation made on the strictest principles was a Bonus Distribution of 1 *per cent per annum as an addition to the whole Life participatng policies, equivalent to a percentage varying from* 23 *to* 50 *per cent of the Premiums paid.*

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CASH INCOME OVER $1.000 PER DAY.

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Affording with the uncalled capital, $875,000.

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For the exclusive protection of Assurers.

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The strong Financial position of this Company, and its MODERATE RATES render it one whose advantages are not surpassed by any other, and explain the fact that it STANDS AT THE HEAD of all the Life Companies in Canada.

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